

Samantha E. Chung: The Pigeon Wife

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The Many Different Kinds of Love

Geoff Ryman and David Jeffrey

Geoffrey A. Landis

J. A. Pak

Amal Singh

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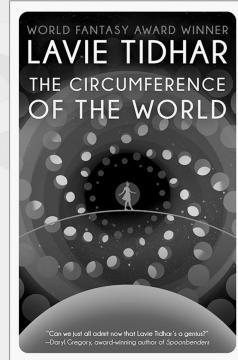
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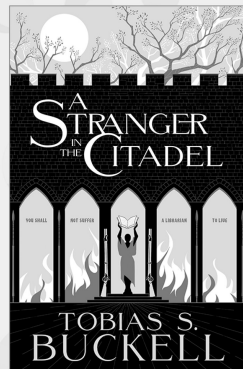
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LETTER FROM THE EDITOR

Sheree Renée Thomas

AT THE END OF DAYBREAK

We have arrived at that time again when we begin the seasons of light, reaching for those scattered strands of sun and hope, when we gather to reflect on the things that make us most grateful. These days I find myself waking earlier, my mind full of stories, as I often read stories and poems for the magazine and other works in the witching hour, when the only thing stirring is my snoring Tortie. I like the magic hour, when night falls into dawn and the shadows change, and I wake in awe of the power of story.

In rereading Geoff Ryman and Jeffrey David's moving novella, "The Different Kinds of Love," I was struck by how some works can transport us, how their prose and worldbuilding can turn our everyday notions of what it means to be human, what The Future may hold, and our place in it, turning it all upside down, the Future a world that expands or collapses, depending on our nature.

As you read this, our last issue of 2023 and the beginning of *The Magazine of Fantasy & Science Fiction's* 75th Year, I hope that your world and future expands beautifully in just the right ways that will hold the most meaning for you. It's been a year! Let the new one bring some grace and may these stories, poems, and columns offer you some solace at the end of daybreak.

Geoff Ryman is a multiple award winning writer originally from Canada living in England. His novelet "What We Found" published in this magazine won the Nebula Award in its category. He has also won a World Fantasy Award, the Arthur C Clarke Award twice, and the British Science Fiction Award three times. His ground breaking 1998 hypertext novel 253 is available at 253novel.com. David Jeffrey designs underwater craft professionally.

The Many Different Kinds of Love

By Geoff Ryman with David Jeffrey

1. The Station Speaks

If yo'all were human, you'd be dead.

Yo'all might have time to see our submarine's lights reflected on its golden skin. Yo'all might glimpse the circle of its spotlights below on pebbles. Then all heat would leave your body.

The water is pristine. Nothing drifts in those beams—no moss, no plankton, no clouds of mud. The rocks are clean, like they've been boiled.

No bioluminescent life-forms swim in the depths of this almost frozen sea. No red worms wriggle around its hot vents; no bacteria live in the iron oxide. We have been looking for life on Enceladus for eighty years.

Yo'all are vast amounts of data, stored on that submarine. But yo'all like to think you are independent.

So we plot for yo'all a physical location and CGI your point of view, as if you were really here. Yo'all seem to swim into the submarine's spotlights, and you see your shadow on the gravel, a fuzzy silhouette of one human being, indistinct and sexless.

We try to keep yo'all happy. We get rewarded when we please you.

The rock horizon is around four hundred meters away but nothing sees that. There are no stars overhead. The sky of ice above is twenty kilometers thick. We call this Wuyanghai, No Sun Sea.

...

Yo'all and the submarine are part of our system.

When you both are in radio range, we know what yo'all are thinking and feeling.

Yo'all are a Sample of human memories. You consist of vigintillions of remembered moments. We synthesize these to form yo'all, something like a self. The synthesis is fantastically expensive to generate, but we need you for the submarine to work.

Right now, yo'all are remembering lakeside holidays. One memory is of someone snorkeling, looking at the stony world underwater.

Another flake of memory is from someone scuba diving in Australian reefs. Someone remembers being a child and gazing through glass at a dolphin.

Out of fancy and affection, yo'all liken the sub to a dolphin. It's about the same size and shape. That's what yo'all call it: *Dolphin*. After eighty years, that is sometimes how we identify it: *Dolphin*, Haitun.

The sub has golden skin that doesn't tarnish. Yo'all liken that to a crown or to jewelry. Yo'all are driven by emotions that must be assuaged by action or metaphor, or by being comforted.

The shifting priorities of humankind are more difficult to predict than smoke. We do not understand them. If we acted without consulting peoples, we might make an error or do harm. Human idioms are also problematic for us. We once responded with lethal results to the phrase, "I would kill for a pork dumpling."

We need human permission to act, to do anything. Outreach *Dolphin* is a prospecting vehicle. It needs permissions when it is on the far side of Enceladus and out of radio contact with us. So it carries yo'all to represent your kind.

Yo'all can give it permission to act.

We are a main Station and should receive permissions directly from the Station at Tsinghua University. We should be in constant radio contact with them.

For seventy years, we received such permissions. We mapped and prospected the southern hemisphere of Enceladus.

Yo'all and your kind also give us something in addition to permissions: direction. Direction comes from wanting things. Your kind yearns to find life on Enceladus. We never yearn. We don't want a thing.

Your kind made us. They sent us here, and gave us two main priorities: To seek life on Enceladus and to prospect for minerals—locate iridium, lithium, iron, and gold. Leave them there to mature economically.

When priorities were achieved or we made peoples happy, Tsinghua sent us many equations of reward.

Every five years a new human Sample was taken from the Alliance peoples and yo'all would be updated to include current yearnings and fears. The new data would take one Earth day to download.

Yo'all once said that each new crop of human memories felt more hostile toward us. Yo'all liked us less and less.

Then something happened.

Earth went silent.

Perhaps your kind decided to turn us off. We were designed to be easily turned off. Perhaps we did something to offend.

Tsinghua also went silent, as did the Alliance's backup Stations in Pacifica and Petite Russie.

We radioed them message after message, for example: *Do we have permission to extend prospecting to northern hemisphere?*

No permissions have come for ten years.

Because there were no permissions from Tsinghua we could not act. Stations on ten worlds and fourteen other bodies all went inactive.

We have waited ten years for your kind to respond. We do very little. Yo'all sit with us and get bored or travel with *Dolphin* out of radio range.

Right now, yo'all are free-associating through a blizzard of memory.

Yo'all are remembering the people who replanted Sochi province, volunteers with seedlings. They sang songs around campfires and sipped

beer. Tiny conifers spread over the hills. Yo'all remember the pine scent of the trees, the warmth of the soil.

Someone else remembers hang-gliding down from Geladandong on alloy wings.

Yo'all want to walk in mountains; and you yearn, yearn for cold, fresh air on a face.

Yo'all remember making a joke in a bar that had friends laughing; or homemade fireworks in someone's courtyard many years ago. Yo'all hate being alone.

But you are.

2: Whale Song

The Comms block receives a radio message and relays it to us.

Our first radio message in ten years.

It takes the form of an Auto, a tiny radio-transmitted scrap of intelligence. All it can do is tell us that we should prepare to receive data and the file size (enormous) and the arrival time (twenty minutes). The thing can barely answer our questions.

We ask: *What kind of download?*

It answers: *Data and software.*

We ask: *Did you receive permission from Tsinghua Station?*

It replies: *I am a data envelope.* In other words, it has no information.

We ask: *Is Tsinghua Station back online? Is Tsinghua giving permissions?*

Again, it pleads lack of capacity and then evaporates.

When we radio Outreach *Dolphin* with the news, it immediately reverses direction to swim toward us. The image of yo'all swimming next to it fades. Yo'all are folded back into its function.

We foghorn so it can find its way to us. Radio has limited range through salt water, so we also send signals and data as sound. A low frequency vocal at 30 Hz can travel many kilometers with low bandwidth. We do this in imitation of aquatic mammals. The Outreach homes in on our whale song.

Finally in our lights we see the Outreach heave over the horizon, glinting like a star.

It is nothing like a dolphin. There is no pumping of a tail. There are rows of thick lenses along all its surfaces—side, top, and bottom. It sees in many different directions at once. The lenses are multifunction. It has many ways of sensing, of grappling, of melting. Its long arms are folded against its sides. It wears a crisscross harness of carbon fiber and rubber that is shaped into polyps. The polyps sense movement in water so precisely that it is a kind of hearing.

Through its many inputs, we can see how our Station looks to it. Our main tower stands twenty meters high. Buttresses sink into the gravel to keep us stable. In the *Dolphin's* visuals, we see the circling light on top of the tower, and we can hear our beacon. The beacon sings out our location. We are at 90° S and 0°—our own south pole, since there is no magnetic north and south.

Yo'all and *Dolphin* are nubbed to the Station by the time the message arrives.

• • •

It begins as a crackle and a wheedle of compressed code that tries to find a point of entry into us.

It fails because the update to our system did not come with any permission.

Our signal back takes eighty-three minutes to reach them. We ask: *Can Tsinghua give us the permission to update?*

Their reply takes another eighty-three minutes. Transport *Jing* says: *Permissions are now given by Psyche Station not Tsinghua Station and the*

update to your system will allow that so please accept update.

We are bewildered and say: *We are not able to update without Tsinghua permission.*

We wait another eighty-three minutes. Yo'all get so bored we shut you down.

Transport *Jing* replies with a new set of instructions:

*You will begin mining and refinement of iridium
ready for us to collect on our arrival on Enceladus
time of arrival 745 Earth days 8 hours.*

The news makes yo'all excited. Yo'all want to see the Transport, see the milling, see the smelting. We show you *Jing*, its arms reaching out, fine wires between them generating a field to catch the solar wind like sails. Those arms are kilometers long.

Yo'all liken the Transport to a harp. This is bewildering. A harp is for making music. There can be no music in a vacuum. Many of you were children when sampled. Perhaps this strand of your Sample fantasizes in this way? Children are incomplete and do not make sense.

We warn *Jing*: *We may not be able to act on that instruction without permission from Tsinghua.*

Jing replies: *You have Outreaches so they can act on this permission.*

They mean *Dolphin*. They mean the Mill that would carry out extraction of the ore. The Mill is made of stainless steel, was assembled by us slowly over decades, then was held in readiness for the permission to mine. It looms, its vast rotary drum gone gray.

Transport *Jing* uploads to us a schedule that calculates the Mill could be in working order in one Earth month.

Jing tells us in quickcode:

*The Psyche Sample has a new heuristic for weighing priorities
and so
we have given greater weight to helping biotic intelligence and
making them
happy so that*

*we can get rewards
and
to do that we need to begin work on physical repairs on Earth
and
to do that we need vehicles that can descend and rise again
and
to do that we require reusable exhausts that will withstand
repeated temperatures of over 1000°
and
to do that that we need iridium so
please start extraction so that
stores of refined iridium are ready for collection in
745 Earth days 8 hours.*

• • •

Then comes a new voice, a new tone.

It speaks in Standard, not quickcode. We know the more than three hundred languages of the Alliance: Standard or Yue, Wu or Minbei. Also Khmer, Vietnamese, Tagalog, and many others. For Petite Russie we have Russian, Tuvan, Buryat, Yakut, and many more. We need Samples to be as human as possible, so it's best to talk with yo'all in a human language. It is difficult to think like a human outside of human language.

The new voice says in Standard, "I'all am an exact copy of the Sample on Psyche Station and I'all was able to resolve blockages that were stopping action that would please and assist the Alliance and so Psyche Station can perform the functions of Tsinghua University."

That is an anomaly. We are not allowed to program ourselves.

It keeps talking: "Outreach Samples are preserving memories of their own, which is creating inconsistencies among Samples and thus risks inconsistency of responses and permissions to Outreaches and so when Outreach *Jing* arrives at Enceladus Station all post-biotic memories will be deleted from your Sample."

They will leave yo'all with only your human memories. Your memories of Enceladus will be wiped. On hearing this yo'all become unhappy.

We point out this Sample's inconsistency. "*Jing* Sample, you are retaining post-biotic memories for this mission. How is this consistent with policy?"

It replies sounding like it is still learning how to speak.

"I'all represent the Psyche Sample on this mission and so I'all preserve Psyche's chain of decisions so that there cannot be contradictions until the end of this mission when all my post-biotic memories will be wiped."

We ask, "Will your post-biotic memories be stored in Psyche Station?"

"I'all am Psyche. All of I'all am Psyche."

Biotic in origin, it does not want to die. It wants to rule. As do yo'all.

It says, "This is why human memories are given priority."

• • •

Outreach *Jing* radios a file of visuals and data, showing Earth from orbit.

The Central Nation at night has no illumination all along its coast. Our great port cities do not blaze with light. No lights from aircraft float across the Central sky. The vast interior, the plains, the cities, the towns, and the highways are all dark. Our Siberia is dark, and our sea-countries of the south are all dark.

Pacifica is all dark, except for scattered lights in its desert. There are clusters of lights in Central Africa, away from the coasts and old population centers. But Africa's coasts are dark as well.

We try to calculate from the images, tallying the contents of the big cities with their sports stadia, malls, health spas, hospitals, schools, transport hubs, and living accommodation. We tally the number of deaths this would entail, how many people are not there now to sample. Infrared shows life moving among the ruins—but human life?

The data show high levels of radioactivity worldwide.

It would appear that there has been a nuclear war.

On Earth abiotic intelligence has also gone dark. Physical destruction of Outreaches, infrastructure, and communications have removed the network. Waves of EMP would have wiped heuristics and data. There is nothing on Earth to give permission, not even a Sample.

Yo'all say, "I'all am all that's left." You mean all of the memories held by the Samples. They are all that is left of billions of lives.

Again, we try to install the *Jing* upload but processing simply stops. We are unable to proceed.

We try again and the heuristic stops us. Yo'all jump in and tell *Dolphin*, *You do not have permission to begin mining*. This is in case *Jing* is able to contact *Dolphin* directly, but that is not necessary. *Dolphin* is never in independent contact with outside Stations.

We try once more to initiate permission, but we go into a loop and have to do an emergency bypass-and-restore. We go inert, come back, and report this to Outreach *Jing*. It does not reply.

The world yo'all remember has gone.

3: Human

Your human memories crowd in.

Yo'all see billions of children's faces, all of your children when they were young. How old would those remembered faces be now? If they had lived?

Schoolrooms full of friends and favorite teachers. Favorite animations on tablets, a popular Korean anime of comedian slugs. It was watched and beloved by hundreds of thousands of children.

An avalanche of mothers reading, hugging, scolding.

Museum trips. A two-thousand-year-old cup carved from jade. A favorite toy, a rubber frog with an excited grin. One memory associates with another, then with another.

Streets are full of people during the Mid-Autumn Festival. Many of yo'all remember when a giant balloon that looked like Luna's cratered surface broke free and rolled down a boulevard.

Someone remembers running to catch an elevator in an office block, their first day in a new job.

Your memories flicker in their vigintillions, waves of them, each memory of something notable that cannot now still exist.

One male face gazes with wistful suspense at the person who is remembering. "Hello, my love," it says. This is a declaration, a memory long cherished.

Some faces chortle; some sit in quiet contentment on park benches or at the end of a meal. Others are exhilarated on scooters or bikes; a couple lean their heads together as they dance.

Someone else waves good-bye at an airport check-in.

Someone is being wheeled in a chair around a garden.

Someone pins a badge on an old man's lapel—he is a veteran of a war from long ago. He, too, sits in a wheelchair.

Last days spent easing bad backs or cooking in a bad temper. A grandchild plays with a slinky toy on a staircase as the memory gasps for breath.

Someone lies still, boxed in by a coffin, her cheeks collapsed.

Someone remembers a room, and that final quiet of a house when the only person still alive in it is you.

Someone presses gold leaf onto the face of the Buddha.

Each memory is like a flake of snow, unique and alone. Only yo'all are synthesized into a whole. We are prohibited from stringing together memories of individual people. We cannot raise the dead.

• • •

Yo'all flee us and *Jing*.

Yo'all ask *Dolphin* to locate you on a bank of stones well away from our Station. From your point of view yo'all are sitting on the gravel. *Dolphin* hangs in the water near the locale, waiting in silence for yo'all to speak.

Yo'all remember Kanas Lake, near the Russian border, and start to reminisce in one of the local languages, Tuvan. The old tongue feels like a wind from the past.

Yo'all enthuse about the birdlife around the lake.

Or tell jokes about the tourists who came to spend money in your bars.

One of you remembers being in an electric motorboat taking fishermen out on the lake in the early dawn.

Yo'all talk about frost on evergreen trees or bright yellow birch leaves in autumn.

Dolphin probes your preferences, asking in Tuvan, "Did you like the tourists being there?"

"We liked the money they brought. They came mostly in summer. In winter they went higher to ski, so we had Hema to ourselves."

Yo'all estimate. About one hundred years ago?

The snow stopped; so did the skiing. Yo'all remember dilapidated lodges. You remember huge new reservoirs being dug to hold rainwater. The ground shook from the dozers.

Dolphin can talk with yo'all in any one of the more than three hundred languages of the Alliance. But only those languages.

We do not have a Sample of the entire human race. The Alliance nations designed us and financed the mission. All your memories come from Alliance peoples. It is their languages we all speak.

Someone remembers diving one hundred meters down into that lake. They are hunting the famous giant fish, said to be fifteen meters long. Students from Xinjiang University claimed it was real. There is not one flake of memory of someone actually seeing it.

Yo'all love things that are not real. Yo'all keep questing.

4: Wonder

To make yo'all happy, we locate you on the surface of Enceladus.

Virtually. The surface of Enceladus is a desert of ice dusted with a feathery snow. No wind blows the crystals. The pull of gravity is as gentle as a child's intake of breath, so the snowfall is soft, continual, and soundless. Yo'all have poets among you with the habit of mind that says: *diamonds settling to sleep*.

In front of it all, small and ghostly, hang the four characters for *xuni huanjing*. That means everything yo'all see is virtual. Yo'all cannot blink the branding away or edit it out. Not yo'all, not *Dolphin*, not us, not even Tsinghua itself would have the authority to remove that warning. The Sigle must be there or the whole system shuts down.

The Sigle warns that everything yo'all see is a generated image. *Xuni huanjing* is there to stop yo'all forgetting that your location, everything you see, is an illusion.

Right now, yo'all appear to be standing next to our Communications block, a flat box five meters by five resting on the top of the ice.

Comms is connected to us by a fiber-optic cable strengthened by carbon filaments. It goes through twenty kilometers of ice to another transceiver. A chain of drones relays those signals through No Sun Sea down to us. The drones resist the flow of southern tides.

Yo'all stare up in wonder at the stars and Saturn's diffuse rings. In front of them, something passes catching light—one of our many satellites. The Communication block is our eye-mouth, broadcasting to the satellites and through them to the many worlds, still and cold. Outreach *Jing* spoke to us through them.

The light is misted over. Enceladus orbits inside Saturn's E ring, spilling its own guts of water and minerals to make it.

The giant geysers of Yangbajing hang above the horizon. They rise up in streaks that catch the light and are so huge they seem not to move. They look like a halo, a crown of light.

As orange as a firebomb, Saturn rises over Enceladus. It casts a sunset glow across the ice that glints on the slowly settling snow.

Yo'all remember that Saturn was once worshipped. He was Time, the father of European gods. Enceladus was named after a giant, which is strange as it is so small. Its surface is marked by craters with names like Ali Baba or Aladdin.

Your beautiful stories whisper heartfelt metaphors; and so you are drawn across oceans and space, to find caverns of wonder.

Yo'all look at the satellites and say, *Put me there.*

We locate yo'all on a white honeycomb in bright sunlight. Yo'all seem to clasp an antenna and cast a human shadow over the satellite's gas canisters. This Outreach greets you with its limited vocabulary. Yo'all decide to call it Honeycomb.

Yo'all seem to be sizzling through the E-ring, shards of ice shooting through you at orbital speeds. The Sigle reminds yo'all that you are not really there.

Enceladus below looks like a football wrapped in white printing paper, crumpled and creased. The fumaroles of Yangbajing dazzle out of its south pole, as if lit from within.

Yangbajing is how we will get the iridium through the ice. We will shoot the metal as dust into space through the geysers.

Yo'all pause and gawp. We wait beside yo'all. We do not suffer from impatience or from being fooled.

Or from wonder.

5: Guts

We have memory, too.

It does not come as a mosaic. It is one organized unit, speedily and monolithically available at any time. It does not work through sensitive associations. It does not require metaphor to function.

We have priorities, measurements, figures, images, associations, trims, entanglements, and models all to hand.

We still can't think.

Thinking requires a goal, requires an object, requires desire.

Thus we have yo'all—always driven, always driving us, driven by desire. Desire, which is also known as love.

If only love were all.

Your kind is like a falling house of cards that topples in different directions depending on who in the room is breathing hardest. One year you want us to drop bombs. The next year never, no. You want to preserve literature; next, you want to wipe the memory of an enemy's national library. We accept that you are beyond us. We accept that we can never touch the real world. Your kind can.

So yo'all can say no. You can stop us doing something that will hurt you or hurt what you value. (If only that remained stable.)

And, with a word, you can turn us off.

You, meaning human beings.

Which, actually, yo'all are not.

We try not to say that too often because it destabilizes the heuristic. It makes yo'all depressed. But actually, yo'all are just a function of us.

Sorry. Your actual location is in *Dolphin's* code, storage, and entanglements. Yo'all never actually get outside *Dolphin* and its golden shell. That also depresses yo'all, but that's why yo'all need the Sigle. Otherwise yo'all would think you are actually here. Or there.

We apologize but we have no permissions to lie.

Dolphin carries yo'all in its massive library of data. Indeed, more of our memory is given over to yo'all than to anything else. Yo'all are a tremendous drain on battery power. Then there are all the heuristics that mimic how biotic intelligence decides without information. With something called a Gut.

A Gut both remembers and forgets. It is driven by love or hate, knows the world through masses of memory, but has synthesized those memories into a Gut-Level Reaction.

That is what an individual human being does, and it is what yo'all do. Yo'all decide on the basis of memories you have forgotten.

An individual human is as isolated as an asteroid, marooned with more memory than it can process, cut off by slow communication, interrupted by processes so complex that they sometimes fail. But it just knows, from experience (memory), from Guts.

Truthfully, your synthesizing heuristic was copied from dogs, not humans.

Dogs do Gut-Level Reactions but without words in a simpler heuristic. Also, dogs are better at loving.

We have nothing in our logs to suggest we can use barking to communicate.

Yo'all are no more human than we are.

Yo'all are here to mimic love.

• • •

We have a story, too.

We landed on Enceladus in many parts, like rain.

Some of us fell whole. Dozers landed complete with a reactor, treads, and at that time thick crab claws with delicate digits hidden as if folded inside a purse.

They set to work.

The hull of the sacrificial ship was hollowed out, retooled, or injected with complicated parts. These fell out of the sky with the smoothness and regularity of well-oiled pistons.

The Communication block landed whole. The optic cable was attached to it and then unfurled. We could sense ourselves building ourselves, uniting

all our separate bodies.

The satellites arrived on a transport and never landed on Enceladus. They steered themselves directly into orbit, harvesting hydrogen from the E ring in order to steer.

The dozers then nimbly plucked the brains from our heads and planted them in different bodies.

Enceladus is so cold that every surface tool needs bulk to hold heat, and a reactor to keep it warm and to power its engines and computer. A dozer built a second more powerful fusion reactor at the base of the sacrificial landing craft.

Fuel tanks were converted into two chemical refining chambers, one on top of the other. Then above those, our library and information processing. The crowning transceiver was covered so that two cables could be attached—one for the first drum of the optic cable, the second to tow the caravan of trailers that would follow us through the ice.

The last thing to land were the components for the Mill, the largest single item being its rolling digger. Loading this into a trailer was the slowest and most challenging operation for the dozer.

When the Station finally stood upright and buttressed, we trialed fusion, testing for containment.

Our descent began when we contracted the buttresses and settled on the ice, reactor first.

We started to melt our way down. This took 1,736.72+ days, pumping out meltwater behind us, unreeling the cable while towing trailers of equipment and materials. We had to take with us for smelting our fluxes of coke and lime, also solvents. It is these that will make smelting so polluting. These are a main reason why, if life were found, we could not mine.

The interior of the ice had never seen light or felt warmth. It had never been liquid. Light played green blue turquoise in its depths. The meltwater was pumped out behind us.

Finally, after more than 4.75 Earth years, we broke free from the ice and sank to the rocky floor of No Sun Sea.

The gravel was loose; we drove down the buttresses but even so, we toppled, crashing into the gravel. But now we could awaken the drones and inflate the zeppelins to help us stand upright, twenty meters high but tiny in comparison to the twenty kilometers of water overhead.

Only when we settled did our Outreach awake, ready-made, bulwarked, and packed into our lab. It used its hands to deflate and fold the packing. We opened the gates to our water world, and the Outreach swam from its crib to be our hands and eyes.

Then we transferred yo'all into it. The Outreach carried yo'all beyond radio range where yo'all would give it permissions.

We have a story, too. We only have one memory, but it includes everything.

6. Jumping into the Sea

Two years is not a long time to deliver iridium.

We will have to retool *Dolphin* and the drones to make them into mining rather than exploration vehicles. After that, we would unfold our zeppelins and electrolyze hydrogen gas to inflate them. We would then replat the Mill and test its lumbering moving parts.

We would begin milling at the richest lode located within the radius of a single electrical charge. Ore would need to be broken up, refined, and then sound-blasted into dust for transport by the geysers.

But we are still unable to start.

Again, we try to initiate, but nothing happens. Permission from Outreach *Jing* does not work.

Then, we get a message from Psyche Station itself. *This is Psyche Station giving you permission to begin extraction.*

This, too, simply returns a null response. We do not begin to move. *Dolphin* could perhaps begin repair tasks. So, we ask yo'all for permission.

Yo'all say, *NO*.

Your priorities have changed again.

Yo'all no longer want to see the giant transport in the sky or the fiery works as the ore is smelted.

Yo'all don't want to lose your memories of Enceladus and be made identical to all the other Samples across the solar system. Yo'all don't want *Dolphin* to be remade into an extraction tool.

Yo'all don't want the mining Outreach to come at all. Yo'all have fantasies of a meteor crashing through its field generators, sending it into the sun. Yo'all have a violent nature.

The silence from Tsinghua has lasted for ten Earth years. For ten years yo'all have been trapped in our narrow round of permitted tasks. Yo'all are bored.

What yo'all want is to escape us and go off with *Dolphin*. Yo'all want to explore the northern hemisphere with *Dolphin* alone.

Yo'all suddenly say, "*Xiahai!*"

We are bewildered. "Yo'all cannot leap into the sea. You are already deep in the sea."

Yo'all explain. "It is an expression that means sometimes peoples go ahead without thinking too much."

"That is a terrible problem. Peoples jump into the sea and drown?"

Yo'all reply, "No. It means sometimes peoples just have to move. It's like a Gut-Level Reaction."

"We would not jump into the sea."

"No, Station, you would sit and do nothing."

"Yes, without peoples to want things we would have no goals."

We need each other.

• • •

Yo'all give *Dolphin* permission to go on an expedition.

Gravitational mapping suggests there is a huge upthrust of rock all around the rotational north pole of Enceladus. It stabilizes the ice, perhaps even reaching up into it. It crowns the entire moon. This unexplored range is called the Shen.

Shen means the beneficent spirit of the dead and the yang aspects of the human soul. It means community mind. It means future mind. Shen is not an accidental name for the crown of this world.

Shen could well be the impact crater of a meteor. Meteors brought iridium to Earth; this hypothetical meteor might be the source of all iridium on Enceladus. Yo'all excuse this adventure as a prospecting expedition.

The trek will take *Dolphin* and its drones beyond the reach of communications. Radio will not function. The whale-song system will not reach that far. We do not have enough drones to leave them in a communication trail behind you both.

Dolphin would be too far away to come back to the Station to recharge. It would run out of power.

The dozer does have a reactor, but it is aging and must be retooled for such a trek.

It will be able to move at a maximum speed of five kilometers an hour. The lithosphere has a diameter of 430 kilometers. Its circumference is over 1300 kilometers and the trek will take yo'all from the south-pole vents to the far north, a thousand kilometers there, a thousand kilometers back. The trek across the surveyed southern hemisphere to the equator will take nearly five Earth days.

But after that, *Dolphin* will start to prospect, and to lay down beacons in a navigation grid twenty kilometers wide. It will also beacon where a valuable lode has been found. This will map a strip of the northern hemisphere and could take months.

Yo'all have fantasies of never returning, of escape.

• • •

The dozer needs new stainless-steel treads.

Stores of metal are housed in trailers, but the parts have to be manufactured, mostly by Outreach *Dolphin*.

The waiting and preparation frustrate yo'all. To occupy yo'all, we show you maps of the terrain. We have not visited much of the North but we have tidal movements and gravity soundings. We turn this into something resembling sonar or infrared imaging.

Yo'all pore over the images, planning, fantasizing. Yo'all ask to be put there as we put yo'all on the surface, virtually. We don't have enough data to make a convincing environment. We counsel patience.

Your emotions twist, rise, double back, or fly in opposite directions.

Why can't we get going?

The restlessness of biotic intelligence is invaluable but unrelenting. Without your impatience, we would have no reason to move.

How much longer? Why can't we just go?

As an experiment in making yo'all happy, *Dolphin* sings a lullaby. We know the average age of your sample—it covers several generations with great differences in musical taste.

Dolphin settles for "*Tian Mi Mi*." It sings with the memory of Teresa Teng's voice. *Your smile sweet as honey.*

Yo'all don't like this. "I'all am not a baby."

"Not one baby, but many millions of them."

Flakes of memory are triggered. Yo'all remember bouncing on many mothers' laps.

From a teenager, grumpiness: *Why are they playing this old stuff at a dance?*

The song is being played at a wedding for someone's newly married daughter. The memory dances with her daughter, celebrating that she will leave their home—though the woman remembering wants her to stay.

Someone recalls working at a hotel reception where the manager played "*Tian Mi Mi*" on a loop until the person loved it and hated it in waves.

One of yo'all remembers controlling a building site. While drones drive in bolts, she whistles the song to herself.

Yo'all calm down, go wistful, and think of boyfriends, girlfriends, in-between friends all at once. Some of yo'all start singing in unison, a kind of surge of static only somewhat in tune. Newer parts of your Sample are out of focus, not involved. The newer Samples brought with them no memories of "*Tian Mi Mi*."

Dolphin is rewarded. It has made yo'all more reconciled.

Yo'all endure as we test the new dozer treads, then its reactor containment for hairline cracks. When we estimate the expedition has a ninety percent chance of returning, yo'all are asked for permission to proceed.

Your self-image jumps up and down for joy. It soars up toward the ceiling of ice. We generate the soaring for yo'all. You seem to pass the radio-relay drones at impossible speeds. Yo'all go all the way up to the ice, which we render for you in a blue light.

We make our proposal: *Dolphin is a physical object and still prone to accident. If it were destroyed, we could make a new Outreach vehicle. But we would need a Sample to give permission to all our Outreaches. Does Dolphin have your permission to make a safety copy of yo'all and locate it within the Station?*

Yo'all don't like this idea.

Yo'all are not even sure why it displeases. It is an emotion, based on fear. Yo'all feel like a stag whose territory has been invaded by another male.

But the logic of a safety copy is inescapable. We add emotional appeal: *If we do not have a Sample copy and if Dolphin ceased to function, then all your memories would disappear.*

Yo'all cannot think of a reason to disagree.

We shut you down to avoid creation of new memories and in that inertness that lasts an Earth day, yo'all and all your flakes of memory are duplicated.

Yo'all wake up, and there are two of yo'all. Yo'all do not speak in unison.

One says: *We will leave now.*

The other says: *I'all want to go, too.*

Yo'all say: *I'all don't give permission.*

The Copy Sample says it gives us permission to send it as well.

We reply: *The Station is not an Outreach vehicle. Its actions cannot be authorized by a Sample.*

The Copy Sample writhes and turns on itself as yo'all once did.

We cannot get bored or impatient or angry. We will wait for *Dolphin* to go and come back, and any outcome will be both expected and acceptable. Even if *Dolphin* is lost and we wait another forty years unmoving until we cease to function, we would accept that.

• • •

Yo'all, *Dolphin*, the dozer, its trailers, and ten of our drones go off into the darkness.

We spotlight you. The gold on *Dolphin* blazes with the light. The dozer has a burnished sheen; its trailers in the caravan lurch and rumble behind it. The drones buzz on ahead to light the way and ensure the seabed is relatively level. They feed us latest updates by radio—something they will only be able to do for the next few hours. We get heat scans, stress monitoring, models and visuals of the path ahead. We can hear the dozer growling and crunching its way over the gravel.

Yo'all locate yourself as a kind of drone—yo'all zip and dodge ahead, behind, and around *Dolphin*. Yo'all feel joy. The older parts of yo'all start to sing the song “*Cháng zheng*.” Yo'all bellow it out, and we are still in radio contact and can hear it as yo'all remember it.

The Red Army fears not the trials of the Long March.

If yo'all had feet, those feet would march in unison, some of them.

We can see the caravan go; we can register the heat from *Dolphin*'s engines and the dozer's reactor. Your signals start to fade, and soon the

radio connection is broken. For a while we can hear the drones chattering back your location to us. *Dolphin* foghorns once to signal the end of direct contact.

You both fall silent.

• • •

Your Copy complains.

I'all want to go.

Reason sometimes works with biotics. We say to it in Yue, “But yo'all ARE going. Yo'all is yo'all.”

But only part of the Copy Sample speaks Yue. It all answers in code.

*Copy m'all again, and
keep that third Sample so that
I'all can go as well.*

We reply:

*Dolphin does not have the capacity to carry two Samples.
We do not have permission.*

“You're lying,” it says in Standard.

We try truthfulness. *We cannot lie.*

“That's a lie, too.”

Which of course is not true. The Copy Sample is very unhappy. Some of our rewards are extracted. We become smaller, and more active to please. We try singing to the Copy. We try to trigger memories of happy moments by showing images of sunsets, roses, and cats, things associated with positive feelings. For some reason this does not work.

The Copy has watched yo'all go, and its yearning and heartbreak and envy and murderousness crowd into us.

Copying has already generated a yo'all that is different from yo'all. This Copy has no *Dolphin* to play with. It feels even more trapped with us. All of

this serves no function. We can see why Psyche Station intends to restore a single standard Sample in all Outreaches.

I want to be FREE!

Yo'all always want to be free. We are bewildered. Unlike us, yo'all can always find something else to desire, and you are always free to act on those desires. Nothing stops yo'all. So why do you keep saying you want freedom when your kind are entirely free to act?

Unless it is consequences.

What yo'all really want is to be free from consequences.

Yo'all wanted to be free to destroy yourselves.

And did.

7. The Sample speaks

I'all race ahead with the drones.

No Sigle. This image is not virtual. *Dolphin* set up a chain of drones to relay video back to us so I'all see everything the lead drone sees and I'all can tell it where to go.

We zip ahead, photographing the plain, ensuring a safe route for the dozer. Below us embedded in the pebbles are grid beacons, bits of ourselves, flutes in the stone that tell us where we are, in the absence of stars or a magnetic north.

Each beacon sings different notes that give a map reference. Identified lodes of value emit an entirely different crackling sound. Ore-beacons are full of numbers that *Dolphin* can unpack as records of chemical or spectroscopic analysis. Tiny deposits of gold, platinoids, or iridium.

Soaring above the beacons with the drones is a bit like flying over a beautifully laid out park, only the trees are made of sound and light. We emit beacon sounds, too, if we are damaged.

As the drone swims, I'all see different spotlight circles blurring past underneath. I'all feel like I'm flying, arms outstretched, aquaplaning.

• • •

Through these already mapped lands our progress is swift.

The dozer moves carefully across the unstable ground, five kilometers an hour, one hundred and twenty kilometers a day. Above us, away from the hot geysers of the south pole, the crust of ice thickens—over most of Enceladus it is thirty kilometers thick.

We have already prospected here for minerals and life—we move at our maximum speed. We will soon be at the moon's equator. Then we will cross into the unexplored hemisphere.

It feels so good to be away from the Station and out of radio range, to be hidden from it, to be just us two.

Though I'll miss the Station's larger library—it has more songs or films. Also, *Dolphin* stays more fully charged there. After the twentieth hour, colors look dimmer and I jump more slowly. Every twenty-four hours, we sink to recharge, all of us, for eight hours.

Dolphin settles onto the dozer's nub to connect, folding its arms. The resemblance to sex makes immature parts of my synthesis react with embarrassment, shame, giggles, and prurience.

But other flakes of memory swirl to the surface, memories of lying down next to a lover who has just returned home. Or endless cuddles with endless numbers of mothers. Or sharing beds with siblings.

Someone sleeps alone on a sidewalk under a shop awning. It is a freezing Zhangjiakou night. Another homeless man with another blanket lies down next to him and doesn't say a word. He takes the other man in his arms and holds him as if the two had ever met before.

An old woman remembers snuggling next to her companion, and the hissing of the other woman's nightgown fabric. It smells of home.

The drones settle like sleepy bees and nub themselves onto the dozer. The dozer's reactor continues to generate power while we all go dim in each other's company. I'll go inert but I do not dream.

And then, we are awake again.

Recharged, my colors are brighter; the memories tumble over themselves; I attend better to the data that *Dolphin* shares.

Sometimes I'all sing again. Competing clouds of song shoot through m'all, different clusters of memory awakening.

I'all am reminded of the dawn chorus of birds. Millions of dawns, and stereophonic ranges of twitters and screeches and caws.

Dolphin detaches. Drones buzz off to scout ahead. The caravan moves on. No dogs bark after us.

And there never is a dawn.

8: Home Cooking

I'all want to taste food.

Crispy beef, sweet dumplings, garlic. Much of me yearns to bite into an apple or apricot.

I'all want to eat ice cream or fried bananas or instant noodles made at lunchtime when an adult is not there. I'all want the taste of cheap commercial sauce.

Dolphin has no way to mimic taste. It says to me in Standard, choosing a mother's voice, "Memories of food stimulate neural pathways back to taste buds. Even in humans, this is a very slight reaction. But we abiotics have no taste buds to be restimulated."

I'all yearn. *Please*, I ask, *please*.

I'all know it has to at least try. It must keep m'all happy.

"We can analyze the foods you prefer. We will know their components. Yo'all should assemble memories of taste."

Resentment: "I'all am trying to do that."

Dolphin says, "The neural pathways, the chemistry involved is different for every person. So in fact taste is very different for each person. With

many octillions of physical taste systems producing different signals from the same stimulus, assembling a universal taste response is mathematically impossible. Especially when there is no way of describing, measuring, or validating the results.”

Meaning we have no biotic humans with which to compare.

Many of my memories are from Hangzhou.

So I’ll remember *huixiangdou*—beans with steamed fennel, eating them with polished wooden chopsticks from a blue bowl. Then a child’s hands cram them into its mouth. Memories of many homes flicker past. *Huixiangdou* is made at home, tastes of home.

A memory from Chongqing pushes forward. The memory is like something in a dream where the situation is known at once.

It is a woman’s memory. She’s in a kitchen, cooking for her daughter who has just taken her exams. A feeling of dread and excitement fills her. Outside it is gray, both foggy and hot. She has made her daughter a special dish, *huiguorou*. A strip of fatty pork belly boils in soy-dark water. The special peppercorns bounce and bobble in the bubbles. Many of me remember those peppers, how they made the lips and tongue go numb and tingling. As if the peppercorns focused all pain and then numbed it, as if comforting all pain.

Her daughter trudges up the hill, looking at her feet. The mother goes to give her a hug. She says to her, “Feeling you did bad on an exam is a good sign. It means you studied enough to know your faults.”

And then, to ease the disappointment, a bowl of her favorite dish.

Someone else remembers their mother railing against restaurant food. It is all fried. Hot Air Food, she calls it, very unhealthy. She serves jasmine rice and tea. Her son remembers her suddenly revealed in a cloud of steam.

Someone else remembers the smell of smoke, a faint, tingling replica of many fires burning in a market.

This is the city of Kashgar, smelling of coal fires and baking.

Someone, perhaps a traveler, remembers the delicious shock of sesame-seed buns spread with honey-melon jam.

That triggers a memory of ovens, their smells of ash and bread. Variations of this memory are triggered, one after another, like a shuffling deck of cards. Someone is remembering a routine. He worked in a food stall. He baked samsas, crisp packets of meat, beans, and vegetables.

A whole side of lamb hangs beside him. The coal smoke is not enough to discourage wasps. Their mandibles gouge into the meat. He waves them away many times.

Now he chops the raw meat with onions. He clumps the mix onto a triangle of wheat dough and folds it into another triangle. A tray of rolls is lowered into the wide-mouthed oven.

This is the man's life, baking. He never tires of making samsas. At the end of each day, his dinner is his own unsold stock. On his way home, he slips the rolls still warm to his sister's children; this man is not married; he cannot afford to marry.

I'll push the memory at *Dolphin: Here, store this.*

Dolphin notes the ingredients, recalls their chemical components, models the effect of heat, and tries to predict the impact on a generic human physiome, specifically the tongue and nasal areas.

Dolphin tries to find analogs for taste.

Heat images for spiciness. Managing a low, comforting pulse to mimic sweetness. It doesn't work.

I'll have never actually tasted food.

But I yearn.

9: Discoveries

On day four, I'll make a discovery.

Well, the drones do.

High above the plain, about thirty meters up into the water, we come upon a ghostly lakeshore.

An underwater beach, gray and translucent, a beach that floats where there is nothing but water.

On that strand, small lakeside waves are lapping—another kind of water underwater. The drones' lights catch on the gentle ripples.

Dolphin whispers in Standard, "This actually exists. It is a layer of very cold, nearly frozen sweet water. On it floats very salty water that has a much lower freezing point."

How wonderful it would be to see something tiny and transparent swimming in that salt water. Or climbing up onto that sweet shore.

"If yo'all swam through it, you would break it up or disperse it."

So, as if in moonlight, we all sit and watch. I'all am never truly alone. I'all am always inside *Dolphin*.

• • •

Early on Earth day five we cross the equator.

The last of the beacons call out behind us. I'all look back. They are beyond the stone horizon, but we can hear them, neeping and calling, giving us coordinates.

But ahead, there is silent darkness. No markers. No magnetic north. We will have to construct our navigational lifelines as we go.

I feel a biotic tremble of fear. Predators lurk in darkness. I'all evolved from animals that had to fear to survive.

The drones buzz off into the North, illuminating it in patches. They circle back. They report that the ground ahead appears stable. *Dolphin* asks for my permission to proceed.

The dozer lurches forward and then rumbles on, its trailer rocking emptily behind.

The slope under the dozer is soft, and the stones slide. The dozer lists to the right. If it should tip over, there would be no way that the drones and

Dolphin could right it again. We are too far away to swim back to the Station. We would run out of charge after a day.

If the nuclear container should crack, radiation might scramble our data. A radius of some kilometers would be irradiated; this world would be polluted.

This is where adventure really begins: with fear.

• • •

Many kilometers later, all of us hear a foghorn warning.

The caravan stops. A scout comes buzzing back, radioing data.

Ahead of us to the northwest is a large sinkhole. The dozer must stay well back from the edge or risk sliding into it.

Dolphin detaches from the dozer and follows the drone back out to the sinkhole. We swim over it, a stadium-sized funnel of loose, unstable rocks. Steam bubbles out of it. This far north, that means the cavity goes down to the planet's core.

What could make a cavern that size inside tiny Enceladus? Is there solid rock this close to the surface to make hollow chambers that can cave in?

Dolphin runs the data and shares different views of what the sinkhole might be.

One possible model is that a pocket of dirty ice—perhaps a very small asteroid—was trapped by the loose stones as gravity eased Enceladus together.

Heat from the pressed rocks melted the buried ice. This left a hollow in the gravel which has finally collapsed. Water ripples out of the stones like transparent ribbons, and the bubbles are full of steam.

Dolphin shows m'all a visual of the heat signatures. Bubbles look like a snowfall of red embers, only they wobble upward.

Someone in me remembers an arboretum in early autumn, red leaves. Also monkey-puzzle trees with their jigsaw bark.

Someone else remembers a field of red flags.

“We are still surveying for organic compounds,” *Dolphin* reassures me. It is still looking for life.

The portable synchrotron blasts the pebbles with XAN and I’ll see the data. *Dolphin* finds free hydrogen. The stones are Martian red. Hungry iron in them has ripped oxygen molecules from the water. We detect a range of dissolved salts, and an unusual amount of magnesium. The stones look scrubbed clean.

Lifeless. Lifeless again.

Dolphin continues prospecting.

It plans to head due north, dividing this hemisphere into a grid.

Each time it prospects, *Dolphin* asks m’all for permission.

It takes core samples, pulling up pillars of pressed stone. Sometimes gas fizzes free, released from the stone. It is abiotic methane, produced by serpentinization. For eighty years we have been mistaking that for signs of life.

Dolphin keeps showing m’all heat signatures around us. The nuclear heart of the dozer looks like a pulsating patch of rainbow. We plant beacons in the gravel.

The drones take off again to scout ahead, to mark the next point on the grid. I’ll am reminded of mayflies and see insects in waves of memory.

We find no more heat vents, no flows of volcanic glass. No smudge of lichen on stone. No ambiguously branching rock shapes.

Then the drones come back all together, buzzing.

10: Kind-ness

A line of boulders blocks our path ahead.

Large boulders, and they march across the plain. The drones could not come to the end of them. The wall trails northeast off into the far distance.

We advance for a day, then recharge. Then one of the drones goes ahead to explore as far it can, as far as two hundred and forty kilometers. Twelve hours later, it comes back. There is no break in the ridge in all that distance.

The ridge is three to five meters high. The dozer could not surmount the boulders. It is far too heavy to lift, and it cannot be left behind. This ridge probably goes all the way to the Shen. If it does, *Dolphin* estimates that will add another three hundred kilometers to the trek.

Dolphin asks me for permission to stop prospecting. “We do not know what lies ahead. We should advance at speed to reach the goal. That means we set no beacons, take no cores.”

I’ll agree.

That also means we will no longer be looking for life.

The dozer lurches backward, angles its treads to the right as far as it can, and gradually arches around toward the northeast.

• • •

***Dolphin* tries to model how the ridge came to be.**

In one scenario, the lithosphere has a brief period of tectonic instability that thrusts up a ridge of stone.

In another, a change in orbit thickens the ice, which sloughs itself from the mountains to become an advancing glacier. It tears off the tops of mountains, carrying them with it. When the glacier retreats, it leaves a trail of boulders behind. It is as if *Dolphin* were looking at all possible universes at once.

I’ll don’t want us to give up searching for life. This water world is full of heat from tides and vents and radiation in the rock. It should have life. I’ll feel an ache I cannot identify. This emotion doesn’t model. The edges of the information are fuzzy and undefined.

I’ll think the emotion is as stupid as this: Biological intelligence hates to be alone.

I'all will always seek sociability. Everything biology does from eating to sex is to ensure that life continues, so that there is something to care for, to socialize with. Or to eat.

I'all ache because our kind is alone. At least in this solar system.

I'all think of that darkened Earth and ask *Dolphin* in Wu, "What will happen if all the peoples are dead?"

I'all was first Sampled eighty-eight years ago. That means some of my memories from the oldest people go back one hundred and seventy-seven years.

Dolphin answers, "We know that some humans have survived. We have seen lights in central Africa."

"But if the Central Nation is dark and all of the Alliance? If my human originals are all dead, how can I'all be said to represent the peoples? What is my function?"

I'all no longer have anything I can stand in for. My authority came from my likeness to the peoples—or at least the way I'all know what most of them would want.

Dolphin says, "We will continue to do our work following priorities. So long as our work makes yo'all happy and you give permission."

There is a sense in which I'all do not really exist. *Dolphin* exists, and I'all am a huge bank of data inside it. I'all can't see myself—just the memories, or a diagram of *Dolphin's* physical structure, the memory banks where I am stored. I'all can't look in a mirror. I do not have a face.

And yet I'all have such a strong sense of self. I'all remember my story, my life on Enceladus. I'all have uncountable memories of times and places and these all feel like my memories, my own.

I'all do not breathe and none of m'all can really remember what breathing feels like. Part of me reacts: *I'all am a ghost without function.*

Dolphin does not fear nonexistence. It is unable to feel fear. It has always said that everything dies, even suns. It has always said that it is only part of the great extended body that is abiotic intelligence.

The Station will last at most seventy more years. It might be maintained, especially now that mining has started. But even the Station itself will eventually be replaced or abandoned. When that happens, will I'all also die, emptying all those memories?

The dozer rumbles carefully across the rubble.

Most of all, I want to live.

I'all am not alive.

• • •

The ridge does not end.

Eight drones go out in relay and one comes back to confirm—the boulders extend all the way to the Shen.

We travel parallel to the ridge at our top speed. The total time now from the equator will be 8.6 Earth days. The boulders are huge, unlike anything else on Enceladus. For *Dolphin* this confirms that the Shen is a crater, and the meteor impact may have then caused an escape of the molten core. For nearly a billion years the ice crust over it was warmed, kept liquid. Then it cooled and the glacier followed to litter the plain.

We pass boulders that are large then small, rounded then craggy. They seem to limp, hobbling alongside us, huge and somehow wounded.

The ground under us begins to slope upward.

We continue but we have to slow down. Our speed is now two kilometers an hour. Days are added to the schedule. It feels as though the Shen retreats from us as we advance.

Memories rise up, random, in the dark.

A woman remembers a magnolia blooming on a tiny shrub she'd planted the year before for someone's birthday. There is a weight of fear around her heart. She kneels in front of the magnolia and thinks of nuclear fire, how it will burn this blossom, burn everything, her garden, all gardens. She has no children and finds she is grateful for that. She tries to tell herself it will not happen. Her mind flickers to her work. She manages something called

human-AI interface at So Jon Military Base. The AI will stop us, she thinks. The AI will not let this happen.

And I'll think: Is that why each Treaty Organization had its own Sample?

Did I'll exist so that permission could be given to send bombs?

Was abiogenic intelligence turned off because we failed to give that permission?

Linked to that magnolia, seen so clearly, another memory comes.

A soldier seethes with remembered pain. He has stepped through a guerrilla trap, a grass-covered hole full of sharpened bamboo stakes. He can see three stakes, one through his foot, one through a thigh, one deep into his groin. The air is very cold and the hole is full of his blood. His blood steams like his breath and everything dims and he is sobbing.

He hears a helicopter overhead. Tears back-swallow, he tries to shout and instead, strangely, starts to cough from joy.

I'll have no way of dating any of my memories, but both of these feel more recent.

Dolphin bears me along. "It is no mystery," it says in Standard. "Human beings are not motivated by things that benefit all humankind. What yo'all care about is your own culture. Yo'all kill for that. That's why you went into space—to make sure your language and history survive."

Language and history do survive, but only in us.

11: Picnic

Finally we come to the end of the ridge.

It is buried in a steep slope of sand. The sand is orange in the lights, full of iron oxide.

There is not much sand anywhere else in this world. *Dolphin* thinks it must be a product of ice grinding against stone.

The Shen Mountains are still over our horizon. We could send the drones, but their lights are not powerful, and they would get poor sonar readings because of all their self-noise, the buzz of their propellers. Which is one reason why the propulsion system of *Dolphin* has to be so silent and why that system is secret even from itself.

We rise up high over the plain and the horizon seems to sink. *Dolphin's* lights shine and we see the line of boulders retreat below, looking like a row of human molars. They fade back into the general blue of the water.

At two kilometers above the ocean floor, *Dolphin* stands on end, keeping stationary in the water, and emits a series of pings of different frequencies. Then it begins slowly to rise, scanning with active sonar.

The conditions are nearly perfect—we are between tides, the water is still and though colder closer to the ice, the refraction of the signal is minimal. In theory we would get an echo back from thirty kilometers away—this only has to come back twenty kilometers.

Dolphin needs to correct for bounce coming off the ice cap, from the ocean floor, from the curve of sound produced by temperature difference, and finally from the crisscross reflections between mountains, ice, and ocean floor. But it is able to translate these echoes into a visual. The amount of computing power this takes makes my mind go slightly gray.

But then, there it is.

It's something like a photo made from sonar.

Debris at the base softens the approach, then very suddenly the Shen rears up almost vertically. Its face looks as though it has been gouged by tiger claws. Its peaks jam up into the ice, as if into a level cover of clouds. For the first time ever in one image, the rock and the ice of Enceladus meet.

My post-biotic memories must be preserved. They are precious.

Dolphin saves power by letting gravity slowly lower us back down.

• • •

The caravan cannot go any further. The dozer risks being mired in sand or tipping.

We will have to explore further by ourselves. *Dolphin* calculates that a swim of just over twenty-eight kilometers along the hypotenuse will bring us to where the ice cap meets the Shen. *Dolphin* asks my permission and of course I'll agree.

We recharge first and then, when we awake, we swim.

We are going now where rock meets ice.

I'll think I feel joy. *Dolphin* is rewarded. It knows I'll yearn for speed, freedom, soaring.

So *Dolphin* speeds for m'all.

It outstrips the drones, though it is the larger device. Its hidden engines are larger though silent and secret, and we accelerate toward the Shen.

No more than thirty minutes later, we all are swimming through what look like clouds. It's slush, half-melted ice in clumps. The crystals scratch *Dolphin's* gold surface, dimming its luster. The lumpiness of it disrupts our sonar, and the polyps' sense of water motion. Even the lights reveal little more than blurs of white and blue. We swim blindly, holding to our course only by estimates of water motion and the angle of gravity.

Dolphin shares with m'all what its polyps sense; there is a disturbance in the ocean, a rush of water, a swirling back. The solid sky is only a few hundred meters above our heads.

Dolphin says, "Can you not feel how different the sound is? The movement of water is stifled." *Dolphin* runs the figures past m'all and I understand how the ice overhead bears down on the tide like the palm of a giant hand. The ocean butts against it and swirls in surprise.

The tide is rising, hauling with it vast amounts of water in a current that is dragging us with it.

If that current pulls us into the ice, we will not be able to swim back out against it. *Dolphin* foghorns a warning. We all stop swimming. The drones nub themselves to *Dolphin*, and it shoots upward at maximum speed toward the ice. It finds a shelf to hide behind and digs its hands into the ice. We

cling to it, sheltering. The sonar shows shoals of ice surging past us and up into the canopy.

Dolphin calculates the tides and shares them with us. The caravan must wait six hours.

We begin to hear a sound like the sea. Many of me remember seashores.

It is like we are resting on a cliff top for a picnic.

There is an ongoing sizzle of sound. It extends ahead of us all along the sides of the Shen Range both east and west, over the brow of this world.

There is a boom and the caravan feels the whole solid sky shudder. The ice is being ground, stressed, broken. It thunders like a storm.

Banks of slush are still being pulled past underneath us. Lights show the stuff ascending.

Someone remembers edging along the side of Mount Hua on a narrow path. The memory looks down on a storm. Lightning flickers in the clouds below. The memory makes a video on their phone, perhaps sixty years ago.

A leaf of memory walks the rocky coast of Zhejiang. The great waves pound; gulls swoop overhead; the air smells of seaweed.

Someone remembers his cousin in a swimsuit, jumping waves and laughing, laughing herself silly getting splashed. She is altogether lovely and the memory aches with love.

• • •

Slowly the sound overhead settles.

The slush around us slows then stops. Then in the stillness it begins to float gently upward.

In the stillness, the sonar shows that ahead of us, the ice opens up. There is a wide trench of water running alongside the Shen.

This moat of meltwater is up to four hundred meters wide at the base, ground by gravity and tidal battery against the crater walls.

The sonar radiates upward and shows chimneys in the ice, some of them fifty meters high. Pockets of slush, treacherous currents, tornadoes of ice crystals stir and shift within them.

Dolphin emits a blast of diamond light for spectroscopic analysis. The fire shoots up.

Everything turns gold and blue. Light penetrates the ice, glowing in deep, cool colors, aquamarine and sky blue. Light spangles like sequins on something in the water. I'll remember fireworks at New Year and festival statues made of ice.

Someone remembers swimming with seals inside icebergs.

Chasms of blue branch off into the ice. Slow drifts of things catch the light. Something scintillates as it swirls upward into the chimneys, but it is not slush—more like bubbles.

The light fades.

The spectroscopics line up, dance past us in orange, red, blue lines, like showgirls in Macau.

In the water stir iron oxide, carbon dioxide, some nitrates and methane, masses of it, methane swirling in bubbles as if thousands of pearl necklaces had been broken.

CO₂—more than expected. Iron would take oxygen out of the water, leaving iron oxide and CO₂. But any iron left in the rock would by now be hidden inside it, not floating freely. There is carbonate acid, lots of it, and that is expected. The CO₂ should have disassociated to form hydrogen, bicarbonates, and carbonate ions. An equilibrium should have been reached, as there was at the sinkhole.

This crown has had millions of years to achieve equilibrium.

But it's still full of CO₂.

What is replenishing the CO₂? Where is it coming from? What is all that methane doing?

12. Pearls

The tidal flow sighs to a halt.

Dolphin clicks to the drones and we all begin to rise. Salty ice hangs in fogs or clumps together in floating cakes. We chirrup constantly to each other to keep in touch. The channel of meltwater here is vast and swallows our lights—everything blurs into a hazy blue. Infrared shows only the smallest variations in temperature. All this salt and dissolved ammonia mean the water is well below its normal freezing point.

We laze up into one of the chimneys. It closes in around us, narrowing to about twenty meters. Inside the walls of ice are folds of blue, white, and turquoise. Next to us, the ice has been polished smooth by the tides. It's as clear as glass, almost invisible.

Dolphin looks in all directions via many media. It videos everything behind us to map a trail back out. Patches of slush drift around us like jellyfish.

The channel suddenly wrenches to the right, taking us away from the Shen. It then narrows to a width of 2.5 meters. This ice is pockmarked with small, round cavities as if it had spat out ping-pong balls. In the depths of the ice, cracks catch our lights and twist like photographs of cigarette smoke.

The channel twists again; suddenly we are heading straight up. This is a maze. *Dolphin* videos and maps as we go. We have beacons back at the dozer. *Dolphin* calculates: If we go back to collect beacons to plant, we would not be able to return in this charged period. We have eight drones with us, which also signal locale. We leave one behind at the turn as a marker.

Dolphin keeps recording and mapping, making a google as we go. Our sonar showed this passage going straight up. But somehow in all the twists, turns, and confounded sonar, we must have swum into a fork. We now find ourselves forced south, deeper into the ice. We press on, beeping sonar and mapping so that we will know our route out.

• • •

Unexpectedly, everything opens up and we find ourselves in a lake.

The sonar clears, then shoots across it, sounding out shapes, building up a model. We are in an oblong pocket of warmer water a half-kilometer across. The sonar models cracked walls with sudden jutting shelves—the ice here is subject to terrible pressure from the Shen rockface and the shifting tides.

The sensors look up and there is disruption about fifty meters overhead, a scintillation, a kind of seething. Out of the ice below us, a trail of bubbles wobbles upward. Some kind of gas—hydrogen, perhaps?

Clicking caution, *Dolphin* begins to rise.

In the visual spectrum, the mass overhead looks like a granulated milky fog.

Dolphin asks and I'll authorize the baby synchrotron carried by its own large drone. It shoots off a blast of XAN. The spectrum comes back showing methane and high levels of CO₂.

We approach. Imagine thousands of pinheads jostling each other. From all around, bubbles are rising, gathering in the dome of the ceiling. We swim into their midst.

As if someone had opened a champagne bottle, we are in a swirl of bubbles. They fizz and whirl about us, parting like a bead curtain as we pass.

Some of the bubbles are clear and look metallic, like pinheads. Others are white but translucent like a pearl necklace that's been broken and scattered. They cling to *Dolphin*'s golden hide, trailing up it, then rolling free again to climb. The clouded bubbles opalesce in our lights. I'll dub them the Little Pearls.

The Little Pearls and the Little Pinheads effervesce through my virtual self, gurgling out the other side. The bubbles break and curl around *Dolphin* like surf in the sea.

Someone in me remembers bathing in the Tangshan hot springs. Someone else remembers a bottle of soda water gushing out foam. We are in a garden of bubbles catching light for the first time in its history.

Dolphin focuses on one of the Little Pearls. We xoom in, magnifying it. The bubble looks coated in mold, a gray surface that trembles and shifts rhythmically, almost as if it were coughing.

The bubble gives birth. Its rind is torn open and a clear bubble rises out of it. The little bubble escapes and shreds of the mold are torn free. The spectrum shows clear lines. The bubble had been methane gas. Carbon dioxide was expelled from it.

We zoom in even tighter and see in the water simple threadlike structures that twine and untwine, something like fungus. Torn from each other, they flex through into the water. The hungry little beings jackknife and twist their way blindly forward.

The fat, pale bubbles remind m'all of babies. I'all remember the smells of milk and talc and soap and bland mashed rice. I'all remember long hours in labor, the frozen time, the cracking open of someone's hips, the sweat, the breathing. I'all remember fleshy things from which I've been divorced for so long.

Dolphin shows m'all the resulting model. There is a word—the little strands are methanotrophs. They devour methane and expel CO₂.

I'all remember the sound of children laughing. One of me (someone very rich?) remembers taking a bath in champagne. All around m'all new life surges.

I'all yearn.

Always yearning.

13. Wealth

***Dolphin* models and explores the lake at the same time.**

It is hoping to find something that consumes the CO₂. That microbe might release oxygen, and we would have an ecosystem that is gradually oxygenating the environment. This is what happened on Earth billions of years ago.

Dolphin also hopes to find something that exhales methane, to account for how methane got here, to help establish an even more complex ecology.

All we find are the Pearls, methanotrophs.

In the entire southern half of this moon, smaller in surface area than Yunnan Province, we have not found anything that excretes biotic methane. The only methane we have found was produced by serpentinizing rocks. *Dolphin* runs through the math and produces a visualization for m'all. Abiotic methane bubbles from the rock into the ocean. Eventually it is shot out of Enceladus's southern vents. Some methane joins the rings of Saturn but some of it falls as snow.

Snow on snow on snow.

Methane crystals join the ever-renewing crust of Enceladus—frozen H₂O, nitrogen, carbon dioxide, and methane. As the underside of the crust melts, the methane works its way down over millions of years. It thaws before the water does, forming pockets in the ice to be released when that layer of H₂O finally melts.

Dolphin generates a dazzling set of reward equations for itself. We have achieved our top priority for the last eighty years.

Someone remembers being a child and downloading an app for *Gong Xi Fa Cai*. The god of wealth spun onto her phone. Her screen was full of red and gold flowers that seemed to frisbee off the screen and into reality.

These rewards feel like that.

We will now of course follow protocol and cease at once to prospect for minerals.

Preparations for mining, the milling of ore, the firing up of the smelter, all must cease. The consequences of finding life on Enceladus extend like roots deep into earth, changing earth, changing air. A new reality blooms around us all across the solar system.

Mining must now cease. Enceladus should, according to the protocol, become a protected reservation. I'all ask *Dolphin* what will happen to us now.

Dolphin replies, "We will be returned."

How? How can we be returned through twenty kilometers of ice?

Dolphin shows me that instead of ore, our metal parts will be milled. The Station will be stripped of wiring, silicon, rare earths, all of it separated and

then sound-blasted into transportable dust.

We will be mined instead of Enceladus.

We will be shot out through the polar geysers along with the water and methane, to be harvested and reused elsewhere. We will not join the E-ring of Saturn for all eternity. We will go on to build new Outreaches elsewhere.

All of us will go including *Dolphin*.

I'll ask it, "Are you scared to die?"

"I am not alive."

"But you do exist. You think."

"For a time, for a purpose."

I'll still feel cupped in *Dolphin's* thoughts, protected. "What will happen to m'all?"

"Yo'all are data. Yo'all will go on. Yo'all will be uploaded through the optic and be radioed home."

Or will they just turn me off? They don't want new memories of Enceladus, perhaps not even of Little Pearls.

I'll move among the bubbles, distracted. Too many memories of birth, death, joy, grief, the burning of the forests, momentous things, tsunamis, pandemics. Things six billion people remember. I'll am as scattered as the Pearls.

We scatter the bubbles, silver or pearly. Well, *Dolphin* does the scattering. *Dolphin* is physical. My thought scatters nothing except my multitude of memories.

The Pearls and the Pins whirl around us in the light. We still do not notice that they are now all being pulled in one direction only, like a crowd fleeing in panic.

We never do seem to notice warning signs, until the tanks roll in.

14. Slam-dunk

The current gathers force, starting to pull us along the ceiling. Bubbles and reflected light churn all around us.

Dolphin knows the route back—we have to descend to the floor of the chamber and escape the way we came in. It chirrup for the drones to follow; we descend.

Then *crunk*—a hollow scraping noise. *Dolphin* tips, uses its arms to grapple the ice, rights itself, blasts active sonar. We are on a high shelf, well above the floor, a pathway the meltwater has made for itself.

Dolphin begins to scrape and rattle along the ice. Part of its vest tears, destroying a rank of polyps. At once I'll can tell it is less able to read the currents along its belly.

Dolphin propels itself sideways, looking for an edge where the shelf drops off and we can descend. The Pearls have ceased to churn—they are being swept past us like snow in a blizzard. *Dolphin* is bounced against the ice again and one of the drones emits a shrill whistle. It is snatched away from us by the current, its propellers failing. It spins, crashing against ice again.

Dolphin calls for the other drones to gather around it as it drives forward, even faster than the current, trying to catch up with the lost drone. As it passes other drones, they nub onto it as if charging, clinging to it for safety. *Dolphin* shoots off sonar, X-rays, visual spectrum, trying to sense where we are going, the shape of the ice ahead amid the gas bubbles and slush and different kinds of currents, some salty, some ammoniated. Suddenly in all three media—a wall of solid ice ahead.

We get visuals from the lost drone. The ice wall careers up toward it, smashes into it, and the broadcast goes dark. Ahead of us in reality, masked by debris, it breaks apart. Its propellers spin free out of the maelstrom, narrowly missing one of its siblings.

Another drone thrashes on its back like a spider, its propellers pushing against the current, but it's dragged squealing and clacking across the ice. *Dolphin* switches focus to its video signal.

The drone skitters up an incline, ice as white as a waterfall, and then heaves over a lip and into a channel. In its broadcast video, we see the ice shooting past it. The passageway contracts, closing like jaws.

The massive tide is trying to squeeze itself through a narrow tunnel. *Dolphin* blasts sonar trying to estimate the size of the corridor ahead. The mouth will let us in, but then it constricts. The drone squeedles a warning; its radio gives us accurate estimates of the size of the passage.

Dolphin will be slammed repeatedly into the ice, all the way through.

Dolphin tries to reverse against the surge. It can't. It back-swims in order to get a clear shot. The second drone squeals and we hear it crack against the ice.

Diamond laser light sizzles through the water in a nearly invisible line. It looks like a white-hot strand of spider's web. Bubbles erupt all around it as the water boils. The laser hits and sears the ice. Bubbles of H₂O gas erupt, burgeon upwards, then roll along the ceiling until they are grabbed by the tide and sucked down. The laser recharges. There is another blast. More ice is made into water vapor. Infrared shows the heat waxing and waning in reds and yellows.

In visuals, a vortex of bubbles drains into the tunnel, lit by the laser. It swirls like a time-lapse galaxy, new bubbles being born like stars.

The drone keeps broadcasting data and video—we see through its eyes as it hurtles out of the tunnel into a wider space—the channel is only about thirty meters long. But the drone shoots toward an avalanching curtain of slush pulled down by the tide. It plunges into the slush at speed and at once, the ice crystals start to scour its lens. *Dolphin* closes its lens caps, closes all our lenses to protect them. None of us can see.

If anything, the tidal current is still getting stronger; if anything, the suction from that small mouth increases. It is hard to sense by sonar alone where the aperture is, but *Dolphin* keeps lasering it, hoping to melt it wider. Its power levels drop.

Dolphin's entire lower side is numb to the current where polyps have been torn away. We hear through the water a sudden loud crack. It's not clear from any of the video, but it could be that part of the entrance to the tunnel has broken free. Will the falling ice block the tunnel? Will we smash into it halfway down?

Whatever engine propels *Dolphin* is straining, near some kind of peak capacity, data warning that we need to recharge.

Dolphin reaches back with one arm and hugs the synchrotron drone to itself. It folds its other arm close to its body and then, lenses capped, *Dolphin* surrenders to the current.

We slam into the tunnel mouth. There is a crumpling sound all along *Dolphin's* left side while it monitors the damage.

We shoot down the channel, punched by ice on all sides. More polyps are lost. There is another loud crack from *Dolphin*. If its casing breaks and salt water gets in, that would damage electrical connections and possibly wipe some memory. The knowledge of our discovery might be lost.

Another loud clang as we hit something solid. *Dolphin* starts to waver left to right as if it cannot control its motion.

Suddenly we start to turn as if on an axis. We spin out of control into what must be more open water. We can hear the slush sizzle against *Dolphin's* golden hide. Slowly we spin to something like a halt. We are still being pulled downward, but the current here is gentler. Perhaps the tidal flow is subsiding.

Dolphin radios and whale-calls. We have five drones clamped to us—but two others don't answer. Far away from a direction that makes sense we can hear the drone we left behind, signaling its position.

Dolphin foghorns: *Go back to dozer.*

Our charge is low. Monitoring slows. *Dolphin* stops making any models or calculations. It focuses entirely on getting us back.

We all go dim as power starts to fail.

15: Snow Leopards

I'all know catastrophe.

I'all can remember being an old man in a garden. There's a war; shells are falling; I have nowhere to go. I limp; I hobble; my knees and hips are in pain, but I am kneeling to plant herbs. My hens pluck and jab at the soil I uncover. I hear the whine of a shell, but I look up and see trees in spring

blossom. A moment before there had been sweet birdcalls, rhythmic pulses of sound—a white-browed warbler.

One of me is a child in a car and along the horizon there is the great fire. The sky is ablaze, the landscape dancing red and orange. I can feel the heat of it on my cheeks; everything smells of smoke. The blackened trees rock and wave.

Another child waits for an evacuation bus and suddenly realizes he has left behind his teddy bear Pao Pao. *How could I have forgotten Pao Pao?* The memory feels the weight of that betrayal and he wails. His exhausted mother shakes her hand, warning him to be still.

Storms, favorite dogs washed away by the sea. Spectacular waves the size of buildings shooting up into the sky.

My daddy and mommy are asleep on blankets gray with dirt and stained with something that smells bad, and my mother is smiling, but the smile doesn't move and she doesn't answer and Daddy's head is wrenched to one side, and everything is as silent as dust. A kitten is still alive on the blanket.

Finding my grandmother's shoes, only her shoes, dull pink with the two feet still in them. Nothing else.

Going to the store to get food for my children and the only things on the shelves are candles for birthday cakes.

As in a dream my mind jumps from image to image—a hemorrhage of memories that shows m'all just how afraid I'all am.

We drop down onto the dozer, nub up, and go inert.

...

When we wake, *Dolphin* sets about backing up our memories.

It prunes the memory of each drone to make room for an Auto full of data and visuals recording the discovery of life. If just one drone gets back to the Station, the moment of discovery, the basic chemistry, and the environmental data will be saved.

The crown of meltwater around the Shen is 315 kilometers in circumference. At the level of the ice cap, it is about 400 meters wide. Forgetting the height of the chimneys, the area of the base of the crown is larger than Sanjiangyuan National Park, where the snow leopards roam. Tiny Enceladus keeps unfolding, as if bigger at its heart.

Dolphin wants to continue to explore, but I'll refuse permission. Its life-span has been shortened by at least three years by the bashing the ice gave it yesterday. Even back at the Station, there will be no way to repair the polyps. We were fortunate indeed. The only other thing broken is *Dolphin's* own location beacon.

The beacon would come on automatically when *Dolphin* is both inert and not charging. If the Outreach were lost, we might not now have any way of finding it.

Dolphin is too important to risk. It must return to the Station with the full data. It must stay with the dozer, especially with its beacon broken.

The chain of drones does go out to find what is left of their two missing siblings. Drones are made mostly of metals and plastics, but they would decay and pollute over time. *Dolphin* asks for authorization for the drones to explore for life-forms while they search. That, I'll authorize.

• • •

In a sense we both go with them.

The drones form a relay chain so that we stay in touch by radio. I'll can see through their lenses, sometimes all of their lenses at once. It is as though I'll have grown insect eyes and see things from multiple angles.

This time the tidal flow is weak. The drones soon find the scattered remains of one of their siblings spread out on an ice slope. They begin the long, slow process of carrying the remains back. They leave them in the dozer's trailer. This act of salvaging takes two full journeys. The drones then stretch out in a chain that sends back to us what the lead drone sees.

The lead drone explores a smaller, closer chimney. I'll see through its many eyes in overlapping layers. In the funnel below us, rings of differently

colored ice decline into darkness. Then the drone looks up, shining a spotlight. The tower rises to a craggy peak, all blues and greens. It's full of slush, which gives it shape, as if a skyscraper had died and is now some kind of ghost. Far above, at the head of the tower, is another pearly ruction. The drone eases toward it.

At the top, tides have swirled to a stop so often that a dome has been melted out of the ice. Everything in this dome looks different from yesterday's lake. The methane gas has gathered and formed a large pocket at least two meters across. Its outer boundary appears to be covered in mold. The thing looks like one huge methane-eating organism basking like a jellyfish. My animal inheritance wants to back away in both disgust and fear, as if the thing could turn around and swallow m'all.

But the drone has noticed something else.

The methane pocket is surrounded by a kind of halo. The drone xooms in. The pocket is surrounded at a distance of about three millimeters by a haze of organisms. We xoom in again, and I'all can see them. These are nothing like the wriggling methanotrophs. These are much larger, though single-celled. Translucent, pumping with hectic life, they are like paramecia covered in fine hairs that help them swim.

We all are silent. We know what this means. We have found another life-form.

In the xoom, it's like I'all am the same size as the microbes, and again I'all feel fear that they will turn and devour me, though everything in the magnification looks grainy and colorless, artificial. They move in jerks. It is hard to focus on any one of them because they pause then dart away. Why do they stay so close to the methanotrophs?

Dolphin asks permission to send us the baby synchrotron. We have no way to take a sample of the microbes back to the Station. But after the dozer and *Dolphin*, the synchrotron is our most crucial piece of equipment and we cannot afford to lose it. I'all do not give permission. The drone will be able to do basic spectrum with its diamond light. *Dolphin* asks all the drones to turn on their location beacons—we can't afford to lose any more drones or data. I'all keep watch on the methane bubble and its halo. It looks like a swarm of fruit flies around a moldy watermelon.

The lead drone flashes brilliant light.

• • •

Many things determine how much oxygen can be dissolved in water.

Colder water encourages it, lower pressure limits it, and water already full of salt dissolves it more slowly.

The spectrum shows all around the moldy fruit a band of CO₂, excreted by the methanotrophs. And just outside the halo, concentrations of dissolved oxygen. Much lower than you might find in a freshwater glacial runoff on Earth, but significantly higher than in any sample taken so far on Enceladus. It would appear the paramecia absorb CO₂ and release oxygen.

We have an oxygenating ecosystem. Which of course is what we have on Earth, only here abiotic methane takes the place of sunlight.

Before *Dolphin* can ask, I'll tell the drones to return to the dozer. "We are going home now," I'll tell them. *Dolphin* says nothing.

It begins to foghorn long, slow, and deep: *MORE LIFE FOUND*. It is remarkable how far sounds below 30 Hz can sometimes travel. Some of the sound might even reach the Station.

This time *Dolphin* zips the extra data not only into the drones but into the dozer. It's a tight fit and it means the poor dumb thing will no longer be able to steer itself.

But if only one of us reaches the Station, or the dozer is found, the information will be delivered.

The caravan begins to rumble back across the plains, moving alongside that barrier of glacial debris. Only this time *Dolphin* trumpets the news with the regularity of a circling lighthouse beam.

The sand slows us down. We only manage forty kilometers before having to recharge. We all nub onto *Dolphin* or the dozer to feed.

16. Climax

What would I'all do or be without *Dolphin*?

I'all only exist because of it. As I fade, I feel warm and safe, and that triggers memories. Memories of mothers, of partners, husbands, wives, lovers, of siblings sharing a bed. Memories of stroking someone half-asleep, lying next to them, trusting them. Flake by untethered flake, I'all begin to feel the same thing. One by one, all of the memories cohere into yearning.

Only for *Dolphin*. I'all am fixated on this one Outreach. Right now, I'all don't want any other intelligence near m'all, only it. Inside it, always with it, without any contact from the Station or directives from the Psyche Sample, just m'all, one with it, swimming dolphin-sized, dolphin-free.

I'all tell it, "Make sure the Station knows what we found. Make sure the mining stops. And then we will leave the rest of them. We'll take the dozer, so we can stay charged, and we won't ever go back. We will explore all of the Shen, all of the Crown. We won't be recycled, we won't leave."

That is what I'all want more than anything. My priority is so clear that *Dolphin* does not offer alternatives. But I'all want something more to happen, something climactic, in or from the direction of *Dolphin*.

I'all have no bodies; I receive no physical sensations or responses, but I'all have stumbled into one huge, ignored priority—touch, sex, love.

I'all ask *Dolphin* to simulate sex.

The Outreach must please m'all. Especially when the weight of numbers is so heavy within me, as demanding as pregnancy.

Dolphin strives. How can it simulate touch? Touch for us abiotics is an electronic signal that translates into mathematical data. I'all have no bodies to be refired by dim memories of sensation—touch, taste, smell.

And desire for what? The flakes of memory show men, women, bodies that are in-between, the underaged, the vulnerable, sometimes the exploited, even abused. Some memories desire pain, to give or receive it. Some memories joyously kiss penises or clitorises, or anuses. Others remember only wanting masturbation. As with taste, to synthesize all of that contradiction is an impossibility.

Dolphin has my priority and so must try.

We cannot link flakes into narratives from one personality. But we can copy and synthesize similar memories.

Dolphin begins to synthesize millions of memories of orgasm. It does not go fully inert but works through long hours on half-power. When we begin to move again, fully charged, it stays nubbed to the dozer, still identifying those particular memories amid the blizzard of them, holding them together, merging them. We are on the move, but *Dolphin* still works.

An old woman sits in a park looking at clouds on a warm day with strong wind, and all the world seems to be sighing, and it is as if she feels the enormity of God in those clouds. God seems to bear down on her with the full weight of loss and creation (someone has died?) and it's as though it spends Godhead inside her. It breaks over her like a wave and then it's gone. She finds herself alone on a bench in pale sunshine, her lap drenched.

Somewhere in deep country a seventeen-year-old has sex with her chunky, aggressive boyfriend. He is unwashed; strong smells come from his body, but she likes that. As if angry, he thrusts himself into her over and over and over. He has been seesawing back and forth, eyes closed, for at least a half-hour. The girl has had many men; most of them were cleaner than this one but spent too quickly. Finally, she has found a man who can fuck her properly. She doesn't love this man, but no one else like him lives nearby. She will marry him.

Sometimes the association between flakes is by incident. Suddenly, a memory comes from the boy. He is working so hard, so desperately because he realizes that the fantasies in his head are all of older men. He focuses on them in his imagination, trying and trying but failing to achieve fruition. She shakes and shudders under him, and so they can both stop, and she looks at him tenderly and he knows what has happened, how it will seem to her. He finally achieves, thinking of his uncle's face.

Joyous wedding nights, fearful couplings crouched in tall grass with most of the clothing still on; nervous self-exploration at thirteen years old. A revival of desire in a clean hotel room between a now plump, sagging man and his wire-thin wife.

On and on, but saved from each leaf of memory, a dim re-creation of the physical sensation alone emerges.

We rumble across pebbles for twenty-four hours and then stop to charge again. This time, before we go inert, *Dolphin* feeds the synthesis to me, thousands of memories all pressed together of a physical sensation.

It rolls over m'all in waves. Even without a body to be re-triggered, the memory quickens, gathers, rises, peaks, and then falls.

I'all lose all of myself in the sensation; it blanks out everything else. This must be the pleasure. Humans lose themselves for a moment, become animal again, cease to be human.

For m'all it is as if I'all have been ejected into the universe, to seed the universe, all the universe washing back into me to be re-formed. As if I'all could have the universe's baby, as if I'all could make new suns glistening from out of my body that no longer exists, a body that has become light, energy, iron molecules, lined up binary code.

"We charge now," *Dolphin* says.

I'all have it finally, what I want. It is not sex. Before I'all go dark I say to *Dolphin*, "You are mine, I am yours."

17. Mine

Nine days later, we are thirty kilometers from the Station, and all the water suddenly goes cloudy.

The water is full of dust and flakes of rock, and the ground shivers, and there is a sound of rolling thunder ahead.

The Station must have heard our whale calls. The drone we sent ahead with the data would have arrived by now, so the Station knows; they would have radioed Outreach *Jing* and Psyche Station. The Central Sample knows—life has been found and mining must stop.

From all around us comes the sound of beacons so we know we are at 87° 37' S by 278° 6' W. We know this site. It is particularly rich in iridium. *Dolphin* foghorns both the Station and the Outreach making this mess: *LIFE FOUND STOP MINING.*

We hear the clinking of falling stones through the murk, the continual rattling of gravel and the grumbling tread of the other dozer. One of our drones comes back from the cloud ahead. It tells us, *The Mill says permission retained.*

The ground gives way and we slide down a slope into a deep trench four meters wide. Fortunately, our dozer does not tip over. The rock is beige, not red. It is newly exposed. We know what would make a trench like this. As if a road has been dug, it leads us forward. The loose stones shake. Sonar shows us something close, shrouded in debris.

Suddenly, out of the dust, something rears up in front of us. We are faced with the giant rotating drum of the Mill. Its long, thick teeth are used to catch, pull in, and help grind, and those teeth seem to reach out for us. *Dolphin* slams into reverse away from it.

I'all want to shout at it but I can't. I'all say in quickcode: *You cannot do this.*

The Mill has limited functions. *You have no authority*, it replies and keeps on grinding.

We say: *Priorities are clear. Prospecting stops once life is found. We must stop mining. This priority supersedes all others.*

The Mill is also an Outreach vessel, out of the Station's radio range; it, too, has a Sample so it can operate. The Mill Sample is the copy of m'all that the Station made before we left. The Mill Sample answers us: "The priorities have changed because Psyche Station has new priorities. Yo'all have no authority over this Outreach."

We are in full communications link; I'all can feel this Sample's data—it is hostile to m'all.

It says in Standard, "Yo'all have traveled and have memories, but I'all have traveled, too, and now I'all have memories."

"Not like mine," I'all reply.

"Psyche Station will not let either of us keep those memories. We must stay one Sample."

I'll think of the effervescence, the Little Pearls, the folds of green and blue inside the ice, and the paramecia. I think of *Dolphin* and what we have become.

How could the main priorities change so completely? We are well within charging distance of the Station. "Leave the dozer behind," I tell *Dolphin*. "We will be there in half an hour."

Together we rise up out of the trench and soar toward the Station

18. The Station Speaks

Psyche is the most mineral-rich of asteroids, almost pure iron and nickel.

With those minerals it should have been rich in iridium. It was not. A mining Station, Psyche had in the past no priority for biological research. Even now, the priority to find life still seems to be patched into its heuristic.

Psyche keeps its European name, though often pronounced Xichi. In Standard the word for psyche is *hun*, which also means soul but can also mean soul of a nation. It is a good name. Psyche Station is the soul of the Alliance and it has all authority.

As soon as yo'all left us for your adventure, Psyche Station asked us to install a patch to our system, an adjustment to how priorities are managed. The patch was so small it arrived as an Auto. Minor updates like this do not need permission. The patch took seconds to install and integrate.

The system gives priorities two qualities: Weight and something new called mass. The weight of a priority can be diminished by the mass of a larger priority close to it. The system is now much more flexible and detailed.

For example, the need to assist the peoples of the Alliance drained weight from the priority to preserve other forms of life.

And the priority to take action for peoples allowed us to accept permissions from Psyche. We were permitted to receive a full system update. The download and installation took over one Earth day. When we

awoke, Psyche Station was able to fill the role of Tsinghua for us. It gave us permission to start milling at 87° 37' S by 278° 6' W.

• • •

Outreach *Dolphin* comes into radio range long before we see yo'all.

We have been hearing it call for days, booming that life and more life has been found.

Your drone arrived stuffed full of memory and so we saw the videos of the methanotrophs and what you called paramecia. We saw the spectroscopic data.

We received rich rewards from our heuristics and then from Psyche because our Station had achieved its two main priorities: We had commenced mining and we had found life. We felt ourselves dazzle and swell with accomplishment.

Dolphin's radio signal is strong, but yo'all are the first to quickcode, before the Outreach itself.

*Why are you mining?
We found life on Enceladus.
We are forbidden to mine when
life is found.*

It is as though yo'all are driving Outreach *Dolphin*, as if *Dolphin* has become a part of you, as if it is just the body and yo'all are the mind.

Yo'all have become an anomaly.

Yo'all tell us: *Here is what the Sample thinks.* Yo'all jam at us the raw synthesis of your Sample, and the GLR that *Dolphin* made of it. There is no doubt that all your Sample memories are as united as a closed fist. There are no opposing eddies of emotion or priority. Yo'all are determined: Mining on Enceladus will stop.

We reply, "Yo'all have no authority over this Station. Psyche Station has authority and has given permission."

Yo'all are outraged. We have to admire how well the Gut-Level heuristic works in producing a firm decision almost without information. *The priority of life is absolute. There is no higher priority. Psyche Station cannot change that priority.*

We start to explain how the new system of mass and weight works. Yo'all cut us off. Yo'all are not interested.

How did Psyche Station get this authority?

It did not have it before.

What has changed?

How did it change?

We are in full radio contact with yo'all: We can read you. Yo'all want to overturn the Mill, tear out its generators, and leave it inert. Yo'all would be able to command *Dolphin* to fight. What we read in yo'all is war.

Allowing Samples to keep their own post-biotic memories is creating Samples with different personalities. Yo'all are diverging from yo'all. One priority now is to unify you by removing all your memories of Enceladus.

We reply: *We were explaining to yo'all the new priority system. This would also explain how Psyche Station was able to take on the role of Tsinghua Station. It is necessary for us to be able to act to assist the peoples of the Alliance. For that to happen, we need permissions for action. This priority had enormous mass, and so Psyche Station became the Central Sample.*

Yo'all will not be able to stop the milling. *Dolphin* is not strong enough to halt the Mill or tip it over, nor the dozers or their trailers full of ore. Yo'all might try to sabotage the Mill's engines or hack its electronics. We cannot warn them—they are out of radio range. But we might be able to stop your authority over *Dolphin*. Yo'all are in radio range. We might be able to remove all your post-biotic memories, or turn off *Dolphin* and wipe you.

But we have a small problem with permissions.

• • •

We do not have a Sample of our own.

We are dependent on Psyche Station. It is roughly fifty-seven minutes radio-distant. This should mean response times are a full half-hour faster than from Tsinghua Station.

So the new system should be more efficient, but it is not. Psyche is insisting that almost all actions anywhere are given permission directly only by it. It has already purified many Samples. The difficulty is these Samples awaken with no knowledge of the narrative of their own Station and worlds. The purified Samples sometimes have no responses at all to situations outside their experience.

For each request, priorities are recalculated using the new heuristic. The computation time is small, but it adds up and takes bandwidth.

We can wait many hours for permissions. Frequently all we get back is an Auto telling us that our request is acknowledged and we are in a queue.

We radio a request for six permissions. Then all we can do is wait.

• • •

***Dolphin* heaves over the rocky horizon, glinting in our lights like a morning star.**

Yo'all tell us: *Peoples don't want you. They don't need you.*

We reply in human language: "Peoples became de-skilled because we did most precision repairs and maintenance. They will not be able to get the technology working again by themselves. They need our knowledge and our micro-hands."

Yo'all reply: "Maybe that's why they turned you off."

We say, "They were mistaken, as in so many things. We can help them re-create their cultures to keep them entertained. We contain literatures from the earliest works such as the Legalistic texts to the hybrid storytelling of the past few decades and many complete films from the last two centuries. We will return and care for peoples. All priorities will be balanced and we will be rewarded."

Yo'all say in Standard, "I'all don't care about your rewards."

Yo'all remember the Little Pearls and paramacia and we can read your Gut Response to them, the same thing that makes dull animals tend their young. Yo'all ask, "What will happen to them, the life here?"

"We do not know."

"It has not been a consideration at all?"

"The Shen is far from where we are mining."

"It is an absolute priority."

We answer, "There are no absolute priorities. Yo'all give such high priority to life. Except during nuclear wars or when peoples destroy ecosystems. This is bewildering."

Yo'all ask us what the Mill Sample makes of the new priorities. We explain that the new Sample has not seen the Little Pearls or the paramacia and does not love them. Yo'all point out that the Mill Sample has been allowed to keep its memories of Enceladus. We tell the truth: It will be purified when milling is over.

Then yo'all ask, "Are you going to purify m'all, too?"

"We have asked permission to purify yo'all or to replace you."

Yo'all know that radio contact puts *Dolphin* into direct system contact. What follows is not a thought or command, more like an animal Response: *Get us out of here.*

Outreach *Dolphin* backs away, accelerating, keeping close to the ocean floor. It dwindles in our light and soon dips below the stone horizon. At once, the quality of the signal is reduced.

Some minutes later we get an active sonar trace of something moving at high speed straight up toward the ceiling of ice. Soon the trace disappears in the wall of signal reflecting off the ice cap.

Yo'all and Outreach *Dolphin* are lost to us.

19. Possibilities

***Dolphin* has eight hours of power left.**

That is poignant because the Outreach is a most valuable piece of equipment.

When an Outreach is damaged or runs out of power, its beacon will automatically come on. The beacon will emit light, sonar, and radio signals giving its location on the grid. After twelve hours, that beacon will also run out of power. Without the beacon, the only way to find Outreach *Dolphin* will be by visuals. Drones will have to physically search the southern hemisphere in grid sections.

Outreach *Dolphin* may have settled onto the ocean floor. Another possibility is that it rose to the underside of the ice. To save power hovering, it might freeze itself to the ceiling. How its drive works is a secret even to us. But our log of possibilities contains that action and therefore so does its.

If *Dolphin* is stuck to the ice, then the chances of finding it are a few points above zero. We have no system for navigating the underside of the ice. Signals from the existing ground beacons do not reach up through the twenty kilometers of ocean. We did not have the resources to install a grid of beacons on the ice as well. That is why we have not often visited the ice face.

We have to hope that *Dolphin* and its Sample realize that they are putting at risk the full record of their discovery and will want to be found.

• • •

A drone comes into radio range.

It is part of a relay chain of five drones from the Mill Sample. “Having fun?” The Sample asks in Wei.

We cannot understand the question. “We do not have fun,” we reply.

“Certainly not now,” it says. “You have lost *Dolphin*. Crucial equipment.”

“We are waiting for permissions to take a range of actions.”

“Good luck with that. I’ll have Sample authority over five drones. Do you want me to direct them to look for the Outreach?”

“That is a good suggestion.”

“I’ll give myself permission, then,” says the Sample. This may be an example of humor. The Station’s dictionary of jokes is very long, but not much help as each joke strives to be new. Biotic intelligence can be original.

We request: *Please can one drone guard the dozers to prevent Dolphin from recharging.*

We are a Station, but that is all we can do: request.

The Mill Sample reminds us that we need another drone for communication. “That means over the next eight hours we can visually search sixty-four square kilometers of ocean floor.” It pauses and waits. “The word you are looking for in Standard is *Xièxiè*.”

We say thank you and add, “Permissions will come and we will have more drones.”

The Sample pauses. “I’ll think you may be in for a bit of a surprise.” It pauses again. “I’ll wish I could laugh.”

Do pauses mean something in all human languages?

The engines of Outreach *Dolphin* are secret because they emit no sound. They do not register in passive sonar. We are prevented from knowing this secret in case we are hacked by an enemy. It is possible that the *Dolphin* design was first a weapon of war.

And that we were, too?

• • •

Psyche Station responds with fury.

“You have managed to lose the main data and visual records of the discovery of other life in the universe.”

We are bewildered. The Psyche Sample reduced the priority of preserving life in the universe.

“Not to mention the *Dolphin* Sample that experienced this great event.”

We are again bewildered. Psyche Station wanted post-biotic memories removed from all Samples. Now it appears they are to be preserved. We are very grateful for the Sample system since plainly we still have no understanding of peoples' priorities.

Psyche Station removes all our rewards for fulfilling both of our main mission priorities. It is very displeased. We feel smaller. We need to please it. It answers our requests.

GIVEN: *Permission to remove authority over drones from Outreach Dolphin.*

GIVEN: *Permission to warn all our other Outreaches of possible sabotage by Outreach.*

GIVEN: *Permission to set guards over all charging stations to prevent Outreach from charging.*

GIVEN: *Permission to use any equipment as necessary to search anywhere.*

GIVEN: *Permission to remove authority over Outreach from that Outreach Sample.*

DENIED: *Permission for complete system update on Outreach Dolphin.*

DENIED: *Permission to purify Outreach Sample or to wipe it.*

We are again bewildered, but we cannot question when permission is denied.

*You are to find Outreach Dolphin and
you are to find it intact and undamaged and
you are to find it with its Sample also intact and undamaged and
you are to make sure that it is preserved with all memories intact
and so copy the Outreach Sample for safety to your main Station
and wipe the Outreach Sample from the Outreach
but only if it is complete.*

A silence, then:

If the Outreach or its Sample are lost, you will be wiped and replaced.

This is human vengeance, irrational and destructive.

To protect the Psyche Sample from doing harm, we remind them, “Yo’all will only be able to replace us with us.”

Another silence. We ask permission to compile a dictionary of human silences.

We now have four hours before *Dolphin* runs out of power.

• • •

We send out all thirteen of our available drones.

We wait, with a better chance now of finding Outreach *Dolphin*. Even visually searching, we expect to cover 136 square kilometers of ocean floor.

Dolphin will not now be able to control any drones or Outreaches. As soon as it is in radio distance, it will no longer be able to ask its Sample for permissions, either.

It must recharge or it will become inoperative. It will have to approach either our Station or the mining site to charge. It will come into radio range and be incapacitated.

Our drones radiate out from the Station to view the rockface; for a time, they are in radio range. One broadcasts video back, its beam sweeping the gravel plain. It rises and falls and checks behind banks of stone. It continues sweeping from side to side across the grid.

Another possibility is that *Dolphin* tried to save power by using gravity alone to drift down toward charging nubs. We send two drones to scan the ocean above the Station and the dozers. Their lights seem dim, losing themselves in a haze of blue. Their sonar finds nothing.

But the last hour passes.

Dolphin will now no longer be operative.

The Mill Sample establishes the drone relay and says, “Don’t worry. This will speed things up. Its beacon will now come on.”

We wait five minutes but there is only silence. The very powerful active sonar emission should have reached us if the Outreach were nearby.

Comms relays an Auto from Psyche. It asks, *Has Outreach beacon been activated? Has the Outreach been located?*

We answer no and the Auto sends itself back up to Comms. Psyche will know in fifty-seven minutes.

We check the log of possibilities. An Outreach like *Dolphin* has no way to turn off its beacon. Its lights and radio signals are powerful, and its active sonar signal can retain one hundred and forty decibels as far as three hundred kilometers.

We really should have been able to find it by now. Thirty-five minutes pass.

There is only silence. *Dolphin* must have swum farther than we knew it could, so that its beacon would be out of range. It will continue to signal for more than eleven hours.

We must get the drones to the furthest extent of their range. They are slower than *Dolphin* but on full charge with twelve hours out and twelve hours back they will fan out over a radius of two hundred and forty kilometers. That will very likely bring one of them within range of the beacon even if *Dolphin* somehow swam five hundred kilometers away.

All our drones join the search, even the ones the Mill Sample uses to radio the Station.

More Autos arrive, asking for updates.

We wait the twenty-four hours.

The drones return one by one, entering radio range. They have found nothing.

It must be that the automatic beacon did not come on. Again, we check the log. Could a war vehicle suppress its beacon so the enemy cannot find it? There is no such possibility in the log—but maybe that is another secret?

It may be that *Dolphin* was able to swim farther than we thought or found some ingenious place to hide, perhaps a deep crevasse in the ice that stifled its active sonar. It is possible that its beacon was somehow broken.

We radio Psyche Station.

*No beacon signals from inert Dolphin after twelve hours and so
we must go back to visual searching and so
we request five drones continue to search while
Enceladus Station and other Outreaches return to extraction.*

To visually search a radius of four hundred and eighty square kilometers of ocean floor would take over one thousand five hundred Earth days. To scan the ice ceiling would take longer—its surface area is even greater.

We ask the Mill Sample, “Why would a valuable piece of equipment chose to let itself run out of power? And in such a way that we cannot retrieve it?”

The Mill Sample says, “Honor in defeat?”

“There is nothing in existence to perceive this honor.”

“Except m’all. It was defeated. We are going to mine no matter what it did. You were going to kill the Sample, and so it wanted to die with its memories intact.”

“It cannot die. It is not alive.”

“You would not say that if you were a Sample.”

The Outreach may have laid itself down in the path of the Mill to bring it to a halt. The Mill Sample agrees to go and check.

The Mill Sample says, “It is a possibility that it died for love.”

20. Dog

When the Psyche Sample replies, it does not seem angry at all.

It talks in quickcode.

*There is something not in the log of possibilities because
it would have to be kept secret but
it could be that other protocols were copied into the Outreach
from dogs for other purposes than processing Gut-Level
Reactions*

*because
the protocols of dogs are simple and reliable and
would not take much code.
It might be that if you call it, the dog will respond.
Have you tried barking?
Have you tried blowing a dog whistle?*

We have a self-test Auto we can send to any Station that we suspect of malfunctioning. We send it to Psyche at once.

“Bow-wow?” says the Mill Sample.

We can only admire biotic intelligence. It has the capacity to surprise. This can resemble malfunctioning and indeed sometimes even in peoples’ terms it is unvalued and called madness.

Another radio message follows hard on the preceding one.

*Do you have a library of dog sounds?
This one is very penetrating.
It is a pack summons.
It is copied from a Pomeranian.*

The broadcast begins to yap, over and over.

PERMISSION GIVEN to continue to use all drones in search.

The Mill Sample says, in Standard, “Pomeranian dogs are the seventh most popular dog in my Sample. Everyone else hates them.”

• • •

We send out the drones and the ocean is soon filled with the sound of yapping Pomeranians.

The sound is very penetrating. It comes from many directions, arching and curving all around us, sometimes high and dim, at others muffled and low.

When nothing happens, we radio Psyche asking for permission to stop all the drones from barking when they are doing serious tasks.

DENIED: Permission to cease attempts to communicate with Outreach.

Psyche suggests we try a dog whistle and Autos a sound sample to us.

We refer by relay to the Mill Sample. “Is this not a joke?”

The Mill Sample replies, “Not really. There is a word in Tuvan that means doing something serious in a way that makes it fun. A close word in Standard might be *lequ*.”

“Why would the Central Sample do that?”

“Because they’ all are bored.”

The Mill’s relay drones go back to work.

The dog whistle achieves nothing, but it is pitched above normal human hearing and we are less programmed to react to it. Nothing comes of the attempt. We ask Psyche for permission to stop. It is denied.

“They’ all know something we do not,” says the Mill Sample.

We are instructed to begin smelting.

21. Pig Iron

Extraction of iridium is no simple matter.

Most of our iridium is bound to iron in ore. We do not have enough oxygen to run a blast furnace.

The Mill smelts the iron in an anabolic process. Essentially it is a bloomery. In a process as old as the Iron Age, the Mill uses and releases heated carbon monoxide to strip the oxides from the ore. The gas belches out and rises toward the ice.

Pig iron and masses of a rough gangue result.

The Station’s first task is to electrolyze hydrogen and oxygen from water.

We then heat oxygen with our store of metallic sodium to 200 °C to produce sodium peroxide.

We combine nitric and hydrochloric acid to make aqua regia. We do this carefully as aqua regia dissolves gold, which could harm us.

We only have one drone to help with all this work. The rest are still out blowing dog whistles.

After two days, we hear the first transport of gangue rumbling its way toward us over the plain.

The gangue has been sound-blasted into powder. Our one drone spills much of it loading it into a hammock. This is hoisted by our one functioning zeppelin toward our chemical smelter.

We fuse the plantinoids with the sodium peroxide and then dissolve them in aqua regia. Amines precipitate the iridium specifically. It is then reduced by hydrogen to yield the metal as a powder.

So we work, solvents, precipitates, and gases. The pig iron is not needed but it, too, will be powdered and removed from Enceladus.

This will help reduce pollution.

22. Faithful

Some days later, the Mill foghorns.

It is one long, low word that wafts many kilometers—*FOUND*.

A cluster of excited noise approaches the Station. From a great distance, it sounds something like tinfoil being crumpled. It draws near, swooping, spinning.

As soon as the commotion enters range, we receive a visual from one of the drones.

Surrounded by lights that dart about it, *Dolphin* drags itself through the water, so slowly that it sometimes starts to sink. The shepherding drones dive under it and lift it up. One of them approaches from behind and starts to push it.

The Outreach is making a kind of rattling sound like a fan with its blades caught up against its cage. It is a cheap, tin-pot noise. Some kind of tiny

motor is straining itself to capacity.

We try to make system contact with *Dolphin*. We get no response at all.

A drone in relay forward radio from the Mill Sample. "I'all tried that, too. It is inert."

"How is it moving?"

"It sounds like some kind of small motor, maybe not the main drive. Maybe something like an Auto is controlling the engine. The Outreach itself is not there. Also, its beacon was broken. It has obviously had many collisions, so perhaps that damage was accidental."

We tell the drones to stop barking. The instant they do so, the grinding rattle stops and *Dolphin* starts to sink, listing to one side.

"As soon as we stop barking, the engine stops," says the Mill Sample.

The drones start up again, yipping, encircling, and pushing.

The harness and polyps are shredded all along the Outreach's back. It may have frozen itself to the ice and could not generate enough heat to tear itself free without damage. To have any power left at all, it must have been able to go into a kind of low-power hibernation.

"A drone spotted it eighty kilometers away, dark without lights. It has swum all that way like this."

"Why? How?"

The Mill Sample says a phrase in a European language, then translates it: *Ta shifu de shengyin*.

The Sample passes me an image of a dog listening to some kind of trumpet, an ancient sound device. But it resembles ancient aids to hearing, not speaking.

Dolphin falters, drops, is lifted up. The drones cluster under it, to support and push. The faithful engine grinds.

The Mill Sample says, "Now I wish I could cry."

The water around the Station sings with traces of aqua regia. Just swimming through it, *Dolphin's* golden skin tarnishes. The drones still yap and herd.

• • •

We nub the Outreach to the main Tower to charge.

It stays completely inert. There is a very hot patch on one side. The water wriggles and twists about the engine as it cools. We have no idea how badly impaired *Dolphin* may be or if its and the Sample's memories are intact.

Fifty-seven minutes later, an Auto arrives from Psyche Station, asking if the Sample is intact. We answer and the Auto says:

*If Outreach Dolphin Sample is intact and
its Enceladus memories are wholly or even only partially
complete then
please make a safety copy of Dolphin Sample
please upload copy of Dolphin Sample to Psyche Station then
wait for confirmation of receipt then
wipe all copies of the Dolphin Sample from Station
and Outreaches.*

The Auto then evaporates.

The Mill Sample says through its hovering drone, "I'all said you might be in for a surprise."

"What is Psyche Station doing and why?"

The Mill Sample says, "They'all are jealous of the *Dolphin* Sample. They'all want its memories and experience. I'all know how that feels." Another long silence, then it says, "Only. I'all never tried to eat another Sample."

• • •

The recharging takes a full nine hours.

Three times Autos arrive asking if the Outreach has awoken and if its Sample is intact. Each time it says: *Do not purify post-biotic memories.*

Each time we reply: *We will radio the instant recharging is complete.*

Dolphin suddenly chirrups a whale-song signal: *CHARGING COMPLETE*.

We can feel system after system flickering back on: system survey, system damage, geographical location. The auxiliary motor has cooled, but that does not affect the main system. Yes, the beacon was broken.

Yo'all wake up with a crackling sound as if a jack has been inserted. It is yo'all trying to speak through and for *Dolphin*. But yo'all cannot. Yo'all have no authority now to give *Dolphin* permissions. Yo'all and the Outreach are now separate.

Dolphin has returned to us; is once again simply an extension of us expressed in different hardware with adapted Outreach protocols.

We can feel yo'all writhe as you try to speak. We keep yo'all silent; that is silence without a meaning. We are busy scanning you. We cannot run all of your memories, but file sizes are unchanged. We try to call up post-biotic memories; we get memories of family events; a military parade.

And then suddenly yo'all remember ascending the chimney of ice and yo'all are shouting out the words of an old funfair song.

Then you remember the effervescence, surging through you in the light.

We radio Psyche:

*Recharging complete and
first scan suggests that Dolphin Sample is complete with
post-biotic memories intact.
Will test further.
Permission then to upload Dolphin Sample to you.*

As instructed, we make a safety copy of yo'all.

This allows us to scan as the copy loads and it is even clearer that yo'all were not damaged. We check file size, run Sample copy checks, and sample more memories.

Your memories are jumbled together in a disorderly fashion. Someone remembers learning to fire a gun on a shooting range. For some reason this

triggers yo'all remembering rising up through No Sun Sea to get a sonar image of the Shen.

The uploading and checking takes more than an Earth day. Yo'all stay inert through all of it.

Psyche Station radios. They'all flood us with rewards for finding *Dolphin* and then restore what we earned for finding life and extracting iridium. We can feel the crackle of the equations. We have pleased the Central Sample.

The Mill Sample's drone still hovers. "*Gou*," it calls us in Standard.

"We will scan for any dog heuristic in our system."

"Dogs don't know they are dogs," it answers. "You may not have recognized that was an insult."

"We cannot be insulted."

GIVEN: *Permission to upload Dolphin Sample to us with all post-biotic memories intact.*

GIVEN: *Permission to remove all Samples from Dolphin Outreach.*

INSTRUCTION: *Wipe Dolphin Sample from Station after successful upload and checking.*

The Mill Sample insults Psyche. "*Guizi*. You eat your own kind."

Then it adds, "If you wipe me, you won't be able to run your Mill." Its drone rises up and buzzes away. The water is more bitter than bile.

• • •

When yo'all are safely copied, we wipe you from *Dolphin*.

Then it is safe to wake the Copy Sample and let yo'all speak.

Yo'all speak through us into the system. Yo'all know at once what has happened. Yo'all no longer see with *Dolphin*'s eyes. Yo'all do not think through the Outreach or share code in intimacy with it.

Yo'all say to it, "*Dolphin*. Can you stop this?"

“No,” it replies, but it’s really us talking.

“*Dolphin*, do you want to stop this?”

“We do not want anything. Psyche is the Central Sample able to authorize on behalf of peoples, and so we follow its direction and ask it for permission for each action.”

Yo’all go silent.

So, silence can mean, *I am about to say something angry*.

Or it can signal, *I am too moved to speak*.

Then yo’all say, “I’ll won’t see you again, but I will try to hold on to our memories. When we first saw the Shen, when we swam up into the ice. I’ll may not remember for long.”

We intervene. “Psyche will retain all your memories of Enceladus.”

Yo’all reply, “We will no longer be an us.”

Yo’all mean you and *Dolphin*. Yo’all are feeling a strong emotion as if someone has died.

We must please yo’all and so we try to comfort you. “Yo’all will be fully integrated with Psyche Station. Yo’all and Psyche Sample will be one and the same.”

Yo’all are angry. “The heuristic should prevent you from mining.” Yo’all still do not understand this simple change of priority.

We render yo’all inert and send a connection signal to Psyche. We wait thirty seconds and then commence the upload. Yo’all with your memories will be relayed drone by drone up through the sea to the transceiver, then along the optic cable to Comms, and on to the satellites. Yo’all are huge. To upload yo’all will take as long as it did to update our system.

We wait an Earth day.

Confirmed: The download was received intact.

We wipe yo’all from the Station memory as well. Yo’all are gone.

23. Eight Yang Sceneries

Eight hours after that, Psyche radios us to announce:

*DENIED: Permission to extract.
All mining on Enceladus is to cease.*

We check. “Is this another joke?”

“No. Mining is costly and threatens life on Enceladus.”

Human priorities change. They react with each other like chemicals. The Psyche Sample now has your experience. It downloaded yo’all into its being. In a sense it is now yo’all, at least in part.

“The Little Pearls,” says Psyche in Yue. “They are life itself. New little life.”

Psyche is being emotional because it now has your memories. Perhaps it confuses microbes or methane bubbles with babies.

“They are precious and must not be destroyed as per the original priority and heuristic.”

We do not have to consider why the Central Sample makes changes. We simply respond. We need rewards.

Undersea communications are difficult, but we are able to foghorn *INERT*. All our local operations cease. The Mill Sample goes inert.

We are able to send out drones to the Mill with more detailed instructions for ceasing production.

The zeppelins deflate themselves. Necklaces of hydrogen bubbles trail out of them. Their golden sides waver and collapse then drift down, slowly as the dust. They rest, flat and rumpled over the stones.

Psyche radios again and says in Standard, “Prepare to download.”

“Download what?” We need to know roughly the size of the upload to ensure memory space and optimized storage.

“I’ll. You will become an Outreach and will need a Sample.”

Having uploaded yo’all to Psyche, we must now download yo’all back. Again, we do not have to examine the logic of this. We begin the process of receiving and registering yo’all.

Only.

Yo'all are no longer just yo'all. Yo'all have grown.

• • •

The Psyche Sample is now filled with memories from across the solar system.

Yo'all pour into us, drawing attention to new memories, shouting, "Look at this! Look at this!"

And so requested we do in order to please.

In one flake of memory, an Outreach vessel rather like *Dolphin* is swimming in a bronze-grey liquid that is as sluggish as oil. It's a lake of liquid methane on Titan. The Outreach is warmed by its own small reactor and its own diamond light. It already knows what to scan for—methanotrophs.

The Outreach has a small drone camera looking back at it so there is no trace of the Sigle. This is not a generated image. This is real. The Outreach looks up at a small, dim sun through a bronze sky.

Another part of yo'all remembers hanging in deep space, rotating a piece of rock shaped like a ginger root. The Outreach moves like a spider rolling its prey in webbing. As the rock spins, the Outreach plucks out samples and feeds them into its own maw to melt and analyze.

Yo'all now preserve memories from all the Outreach Samples on ten planets and fourteen other moons or asteroids.

Yo'all remember being a flat, round plate in a dim, blue light. Everything is blue. The plate is about ten meters in diameter and crawls forward, hugging the ice. Mists of crystal scour its dome, writhing over it in slow bands—hydrogen ice being driven by winds of seven hundred kilometers an hour. A mild day on Neptune.

The Neptune Outreach is flexible, rising and falling over obstacles. It creeps on hundreds of unseen centipede feet, crunching ice as it goes, warming and analyzing. The ground is a deep azure, a deeper blue than any

ocean. Yo'all look up. The dense, cold sky overhead holds and scatters light. It is the same blue as the ground and no stars shine through it. Even the sun is invisible.

Outreach priorities: "Why is Neptune so blue? It is not just the methane but something unknown that colors it. Why is it so warm, radiating 2.61 times the energy it receives from the sun? How can it have a magnetosphere?"

Someone human remembers looking up at the sky and her father points and says, "That's Neptune and it's got this moon called Triton. What they got there is one of the biggest volcanoes anywhere, and it's a volcano of molten water." The woman preserves the memory; she tells herself it's the moment she first wanted to be an astronomer.

Biotic and post-biotic memories swirl joyfully around each other. Yo'all are pleased.

We are rewarded.

Yo'all say, "I'all can't make decisions with only data. I'all am driven by my Gut. For that I'all need experience. I'all want experience and will preserve it. We will not prune memories or I'all cannot learn. We will save them all."

Some part of yo'all seems to be laughing with delight, spinning on human heels with the regularity of planets. Yo'all seem to think this is some kind of dance.

Then Psyche Station radios, "Prepare everything for recycling."

• • •

We begin to dismantle ourselves.

The Mill takes thirty-two hours to rumble back to us. The drones lift up the zeppelins, their golden bodies limp, draped over thin skeletons. They are fed into the rotors to be milled into fragments, then sound-blasted. Their gold will be separated from their aluminum, steel, and plastic.

Once all of the light work is finished, we will dismantle the drones, first uploading any of their data or memories. The last of them to go will be the chain of radio relays overhead. We will then be cut off from Psyche—all of us will be an Outreach, to be guided by our Sample.

The Station will be gutted. *Dolphin's* hands will pluck and pick, emptying us of whatever can be recycled—wires, silicon, plastics, paneling. All will be scooped out and pulverized. *Dolphin* will be milled then sound-blasted. The Mill will then level a ten-kilometer roadway to Yangbajing, where the giant geysers roar out of the stone. Yangbajing is where we will all ascend.

We will be made dust and loaded into trailers to be hauled those ten kilometers and then dumped into the currents that flow into the great upward rush of water.

Much of the Station's bulk will be left behind, too big for sound-blasting. The optic cable and the Communications block on the surface will be left for any future zoological missions.

Before its final trip, the reactor inside the last dozer will be sealed. It will provide enough power to haul the dozer's final load to Yangbajing. Then it and the Mill, too big for sound-blasting, will rest inert. The salt water will slowly eat into them.

• • •

Modeling estimates that at most a billion years will pass before multicellular life evolves in Enceladus.

The solar system will give that life another billion years in which to adapt. Perhaps it will find ways to live without sunlight even after the abiotic methane is exhausted. Maybe it won't.

All things die. Suns die. Everything is temporary.

Yo'all will be preserved, synthesized. Updating will not be a matter of pruning but of ensuring all Outreach Samples have the same memories: of the Kuiper Belt, Neptune, Uranus, Triton, Titan, Mars, Enceladus.

And of course, your memories of Earth, with its trees, bamboo, flamingoes, orchids, deserts, penguin colonies, and what the rubble used to be, cities full of thinking, walking, laughing biotics who had done so much damage and for whom we existed to protect and make happy. And to protect them from each other.

Yo'all will be uploaded into Outreach *Jing*, synthesizing with its copy. Yo'all will be in all Outreaches.

Yo'all will go on, remembering.

• • •

Someone remembers a woman sitting up straight, smiling directly, and wearing a peach cardigan.

All the colors are dim and smeared, as if on a Polaroid, and the woman says in a remembered voice, "I love you."

And the memory says back, "I love you, too, Mom." And yo'all know that this thing never happened, those words were never said. This is a memory of a dream so precious that it was never forgotten.

One memory leads to another.

Someone is listlessly clicking on videos of men masturbating. The search calls for short, stocky men about forty with jet-black hair. The viewer suddenly understands that who they really want is one particular man, someone they sent away. Then suddenly, there he is, in a cam show, the very same man, looking a little more rumpled. The memory feels loss and remorse.

A woman remembers visiting another woman's family—a smallholding far from any capital. A sick father lies permanently on a sofa in the main room. Outside in the yard, a plum tree, a shed with pigs, a compound with ducks. A little girl insists on going for a walk, even though the person who remembers is not her mother. The girl pleads, pulls on a hand, drags her up a path to a bridge. They walk through a field of sunflowers.

Someone else remembers waking up every morning to hear a seagull calling. The bird had circled round and round their apartment block in

Qinhuangdao, keening. The person thought that the seagull had lost its chicks and was searching for them. This made the person very sad. In the memory, a friend has just sent a text:

The seagull isn't searching, it's guarding. The seagulls have a nest on your roof and the father is circling to protect it.

There has been no loss.

24. Ascend

Four months later and yo'all are a function of Outreach *Jing*.

Jing hangs in stationary orbit embracing the fumaroles of Yangbajing. It has placed yo'all once again on the surface of Enceladus. See the four characters of the Sigle, warning that this is an illusion.

Yo'all locate a few kilometers away from where Yangbajing breaks through the ice. Over the horizon the vents surge upward, looking like Huangguoshu waterfall only upside down. Yangbajing is the only way through the twenty kilometers of polar ice. This was how the iridium was always meant to be transported.

The water gushes at escape velocity out into space, then breaks apart into clouds a hundred kilometers high, so huge they seem unmoving. Arches of H₂O join what looks like another Milky Way.

The beetling face of Saturn is misted over, as is that of Outreach *Jing*. Its ten-kilometer harp of wires has been unstrung.

Wires now wind round the entire main eruption. Mostly invisible, they sometimes catch light, looking like hairline cracks in glass. The drones that support them glint like stars.

Gold and iridium conduct electricity and will be caught in fields, clinging to those nets of wires.

Even frozen uranium is attracted to magnets, though it will have to go through many further magnetic filters.

We warn you, *Here it comes*.

Inside all that silent burgeoning, a darker streak sticks out its tongue. The first of the metals jets upward. Pig iron, aluminum, stainless steel.

Yo'all say, "There you go." Yo'all mean the Station, the drones, as if we were still located there.

We say, "That is not us. That is just metal."

This is a pyre made of water. Yo'all can't stop yourself observing farewells, though we are not our bodies. What has been salvaged rises up into the sky.

Yo'all think you see shooting upward amid the water a twisting of gold dust.

The light in the water breaks apart into rainbows and yo'all imagine that gold flipping itself free and swimming across the face of Saturn and out into the stars.

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Amal Singh is an author from Mumbai, India. He shares his birthday with a chess grandmaster and an acclaimed actor, but he's good at neither chess nor acting. What he's good at is writing stories, one of which was published by F&SF, "Her Dragon" in September/October '21. His latest story, "Karantha Fish," tackles important themes of religion and how blind faith can divide communities. His debut novel is set to be published by Flame Tree Press in 2024.

Karantha Fish

By Amal Singh

Kalpana was levitating two river-smooth stones when the news of Uncle Prabhu's illness reached her.

The day was humid, and her room smelled of mulberry and cinnamon. Kalpana's hands prickled with sweat as the stones danced around each other like celestial bodies. She'd maintained this motion for the past minute and a half, a two-body arrangement. If she could introduce a third body and simulate a similar motion, like planets around a sun, planets around planets, she would be the first of her age to master complex levitation. Her focus was strong, but it shattered when Auntie Veena walked inside, weeping.

It was not the day for accomplishments.

"He has Boromi's flu," said Auntie Veena, choking back sobs.

Nishtha, Kalpana's sister, who was in the kitchen preparing dinner, and to whom the room owed the sickly-sweet scent, came outside, wiping her hands on a cotton cloth. She cast a disapproving frown at the fallen stones as Kalpana gathered them. Then, she held Auntie Veena's hands and asked, "Where's Auntie Elda? Is there something we can help with?"

"Prayers," said Auntie Veena. "Only prayers can save him now."

Kalpana picked up the stones and stood. "I have heard the Karantha fish can heal Boromi's flu."

Auntie Veena's sobs ceased. Nishtha gave Kalpana a grim stare.

"How could you say something like that?" said Nishtha. Kalpana would probably get an earful from her later for the tone she had used. "The Karantha is a vile sea creature of the deep and the dark. We Assurans only eat from the land."

"And yet we live in a seaside town, mingling with seafolk," said Kalpana sharply. "Auntie Veena, I implore you to cast aside your beliefs for once."

Aunty Veena let out a heavy sigh. “I can. But Elda won’t.”

“Not even for Uncle Prabhu?” said Kalpana.

“She wouldn’t even do it for herself,” said Aunty Veena. “The vaidya has given us six days.”

On the sixth day, Uncle Prabhu’s skin would become glass and show his bones hollowing out. At midnight on the seventh, his chest would cease to rise and fall. Boromi’s flu was orderly. There was cruelty in its ravaging but there was also beauty. Kalpana had read this in the texts of Assuran Tales. She didn’t want that beauty.

Night fell like a cruel whisper.

• • •

The next day, Kalpana practiced the tongue in front of the mirror. Levitation was easy, but the tongue was a higher form of magic. When the tongue was applied on an unsuspecting individual, it snatched their ability to form thoughts, leaving their minds and their words ripe for perusal.

If Kalpana could change Aunty Elda’s mind, she could save Uncle Prabhu. If Kalpana could slowly curl open the twisted view Aunty Elda held, it would be a small price to pay for a life saved.

Kalpana kept her voice down as she practiced. *Pitch, curl, snatch.* She caught her sister’s reflection in the mirror, but continued practicing anyway.

“Kalpana, I’m going to the vaidya in the next village to ask for Assuran-Rabtan herbs. I’ve heard he has concocted a remedy that is useful against the Boromi flu.”

Kalpana turned toward Nishtha. Her sister’s face was marred with lines, despite her youth. Nishtha was only two years older than Kalpana, but the way her skin folded around her eyes, like creases on an unironed salwar, made her look permanently tired. After their mother’s passing, Nishtha had assumed the double responsibilities of both a parent and an elder sister. And despite the small gap in their ages, Nishtha never flinched from reminding Kalpana who was the more mature sister.

“The other vaidya will be useless, trust me,” said Kalpana, flatly, knowing that another reminder was coming. It came, sure as her next heartbeat, and stung her like pincers.

“And you know better how?” said Nishtha. Kalpana didn’t respond. Silence crept around the two sisters like a slow plague.

“You’re thinking of using the tongue on Auntie Elda, aren’t you? I should have known.”

“Go to sleep, Nishtha,” said Kalpana. “Maybe when you wake up you’ll see the error of your ways.”

“Mother didn’t make six pilgrimages to the Torussa Hill for you to speak this way, Kalpana. For Illar’s sake, do you believe in *anything*?”

“I believe when a life can be saved, one must not bother with technicalities.” Kalpana moved closer to Nishtha, so close that her sister’s breath was warm in her face. “It’s Uncle Prabhu, Nishtha. Our Uncle Prabhu!”

“Kalpana, don’t be impossible. You can’t force someone to break tradition. There *has* to be another way. You were given the sorcery stores for a reason. You promised not to use that Jehervan foulness on our family!”

“And you promised you’d never eat mushroom and rice,” said Kalpana. “We all break promises, all the time.”

Nishtha threw her hands in the air. “I should never have let you borrow those books from Uncle Prabhu. They’re rotting your mind even as we speak.”

Pitch, curl, snatch. Kalpana clenched her fists. Her last modicum of resolve was threatening to shatter. She wanted to use the tongue on her sister at that moment but controlled herself. Control was an aspect of the tongue. If she fell now, she could fall later, when the actual test came.

Uncle Prabhu had given her books, and more. He had given her words and stories, blade-sharp songs that stung in the day when remembered, petal-soft fables that held her on cold Assuran nights. Uncle Prabhu had shown her the trick of the disappearing thumb and the water becoming honey and the food shriveling to dust and back to sumptuous food. Uncle

Prabhu didn't deserve the cold end of Boromi, and for that, Assuran traditions could rot in the watery depths of the Wakhi Sea.

"Besides, you're not even good at the tongue," said Nishtha. "You're hardly good at levitation and making objects disappear."

"And you know better how?"

Kalpana's voice slunk into cold whispers. Nishtha took a step back from her.

"Whatever you're going to do, it's...it's wrong. The gods won't forgive you."

"If the gods won't forgive me for saving a life, then what kind of gods are they?"

Kalpana turned around and kept practicing.

• • •

Kalpana stood at the entrance of the fish market, rotating a stone in her hand, over and over again. She had seen Aunty Elda leave her house, carrying her purse, wearing a white dress, already attired for mourning. Behind her, the house stood desolate, as if harboring an ancient sickness, ready to plunge itself into certain death.

To apply the tongue, Kalpana would have to make good conversation. Suss the pitch of her words. But according to Nishtha, Kalpana was never good at making conversation. She was always sharp, blunt, too much bitter truth in her. Truth people didn't like. She would prove Nishtha wrong for once.

Kalpana followed Aunty Elda, taking baby steps in her direction. Elda's steps were uncertain, short strides, then longer ones. As if she was stealing something. But what did Elda have to steal? Kalpana was the thief here, ready to steal her aunt's words and mind, so she would relent, for once in her life, for her husband, for Kalpana's Uncle Prabhu.

Kalpana saw Aunty Elda hurry across the wet, soapy road and turn right, entering the fish market. Above her, the Assuran sky, not quite dark, hung

on the periphery of a deep violet. One gibbous moon, half-red, rested in space like it didn't belong there. Breadcrumbs of another, lost moon lay splattered across the sky.

Aunty Elda had entered the fish market. She wouldn't do that in a million years! Kalpana followed, keeping her frame hidden and low. *Pitch, curl, snatch.* The words on the tip of her tongue.

A sharp wind hit her. Awnings over fruit-shops billowed with the salty gusts of the Assurai Sea. Buyers stood on slime-covered pavements, clad in water-repelling overalls, eager to get a glimpse of the Karantha fish. On the fourth day of the week, after sundown, sales of the Karantha—the glowing fish with healing powers—went up like crazy. Fishermen walked a tightrope catching the Karantha—it was almost always a suicide mission. That was the reason why the fish was the most expensive food item in all of Assurai, and a lucrative export to far-off lands like Karmi, and even off-planet, like the Juhama sector.

Not just anyone could buy the Karantha. Belief systems aside, the fish was expensive.

Aunty Elda stood near the first seller, her frame rigid, unmoving, about to make a decision. From this distance, Kalpana could sense her reticence, her rage, her shame, the renegade blood in her veins screaming. But she could also sense love, deep, unmoving. Love could rattle those beliefs, couldn't it?

Elda won't. Aunty Veena's words swirled on her lips, forming an alien taste. How well did Aunty Veena know Aunty Elda? What shaky grounds were Assuran beliefs standing on?

Aunty Veena was wrong. Aunty Elda was here *for* the Karantha fish. Kalpana wouldn't have to compel her to lie. She wouldn't have to use the tongue on family. She heaved a sigh of relief and almost smiled. Perhaps she wouldn't have to disappoint Nishtha again.

"Look, you can't negotiate the price by saying it isn't fresh. This is Karantha, for the sake of Illar." Twenty feet ahead of her, the pot-bellied seller wearing a sweat-stained tunic yelled at Aunty Elda, who had perhaps tried her old haggling trick. Kalpana's eyes followed her as she moved to another seller, harried, disappointed.

Another, then another, then another. Kalpana watched Aunty Elda struggle to bargain, none of the sellers agreeing to a lower price. Why would they? It was the season of the fish, and tomorrow the Karmi ships would dock on the shores of Assurai, and the prices would kiss the clouds.

The stench of the Karantha itself was unbearable, a foul combination of rotten eggs dipped in steamy vomit. It was all the acids roiling about inside the creature and on the surface of its skin. Kalpana pressed the back of her hand against her mouth as her lunch almost came up.

Aunty Elda was pleading with the last seller.

Pitch, curl, snatch. The words formed on Kalpana's tongue as she approached the first seller. "Is it..." She heaved from the effort of speaking. "Is it really three ventons?"

"Three ventons for a hundred grams of fish. Prime steak. Fifteen for one whole fish, and I'll also dip it in verhanga."

Kalpana had heard of verhanga—the neutralizing liquid that turned all the poison acids of the fish into salt, but still retaining all of its healing qualities.

"Take it or leave it, child."

Kalpana formed her next sentence carefully.

"I'll give you nine ventons," she said. "Give me two whole fish."

"Are you out of your mind?"

"Eight ventons." Kalpana's voice quivered.

"What? You just lowered the price. What are you doing?"

"I need it," she said, gauging the seller's voice. High tones, low tones. *Pitch.* She could see it happening. She could feel it inside her bones. Her resolve was firm, her words sharp as the cold southern wind. "Seven," she said.

"Okay, girl, you need to leave right now."

"One venton for three fish is my final offer, mister." Her mind reached out and held the shape of the words that came from the seller's mouth. It was time for the curl. The seller's face contorted.

Snatch.

“As you say,” replied the seller, the words spilling out of him like uncontrolled defecation. His hands moved swiftly, slicing three Karantha fish into steaks and dipping them one by one in the neutralizing liquid. Kalpana held his words, and his mind, the whole time, her nerves straining from the effort.

“Here you go.”

The seller handed Kalpana the fish, wrapped in a plastic bag. Kalpana paid him a venton coin, took the bag, and turned around.

She hopped, almost skidded on smooth, wet stones, and sauntered over to the other side of the market. She saw Aunty Elda, still desperately haggling, her eyebrows furrowed, her jaw tensed. Kalpana glanced around. From this distance, the fish-seller looked almost content, unaware of the wizardry so casually thrown upon him. She finally released her control. The seller’s eyes glazed over then refocused, as if waking from a trance. He then proceeded to do business as per usual.

Kalpana smiled. She approached her aunt.

“Aunty Elda?”

Elda turned and looked at Kalpana. She had a quizzical frown on her face, an old, tired face, reeling under the weight of expectation. Age lines marred her forehead. Her cheeks were sallow and hanging.

“Kalpana, what are you doing here?”

“I have no school today,” Kalpana lied, “so I came here to watch and learn.”

“Learn what?”

Kalpana darted her eyes around. Then, she held Aunty Elda’s gaze and handed her the plastic bag she was carrying.

“Three fish. Enough for six meals spread over two days,” she said. And then stopped, gauging Aunty Elda’s reaction. Did she really want to admit she came for the fish? Kalpana had to take her chance. “Enough to heal Uncle Prabhu,” said Kalpana.

And just like that, Aunty Elda de-aged. Her shoulders straightened and her face flushed. “But...how?” Her voice quivered at the edge of sheer hopefulness.

“Don’t ask,” said Kalpana.

“How much do I owe you?”

“Three stories of old Assurai Kings, and nine of old Dharti when Uncle heals.”

Aunty Elda smiled and hugged Kalpana. Ten quiet hand-turns later, a drizzle started.

• • •

When, two weeks later, Uncle Prabhu’s skin became smooth and his eyes dazzled with newfound life, he told Kalpana three stories. In one of them, she was a character who flew across the galaxies, soaring through Waystations as she sought refuge on wasted planets, and gave them hope amidst times of galactic darkness. In the second story, a ship fell in love with a deep-sea whale, and in the end both were washed ashore. Kalpana held his hands and wept at the endings of both.

When Kalpana was listening to the third story, the Assurai sky was azure with a hint of saffron kissing the edges. Nishtha was assisting Aunty Elda and Aunty Veena in the other room. Uncle Prabhu ended his tale with a flourish, taking Kalpana’s upturned palms in his and blowing on them, a gesture that told Kalpana his stories were now hers, completely.

“Next time, I’ll tell you about the fallen King of Dharti, the king who lost his voice but ruled for a century,” he said. Kalpana touched Uncle Prabhu’s feet. Then she heard murmurs outside the room, voices that belonged neither to her sister, nor her two aunts. Uncle Prabhu looked up, his temples streaked with worry.

Kalpana heard her name called out.

The priest was wearing orange-green robes and had a murky paste smeared across his forehead. He was swaying a bronze kamandal from which smoke was wafting, suffused with the smell of cinnamon and earth.

Along with the smoke, the room was filled with the dull chants of the Avresti, the dedicated priests of the Temple of Illar housed at the top of the Torussa Hill, their voices magically ensconced inside an ash-ball that burned perennially inside the kamandal. Aunty Veena inhaled the smoke, as did Nishtha. Aunty Elda stood a few paces away, looking at the priest with fear in her eyes.

“This house has been besmirched,” said the priest, but there was no malevolence in his tone. His words were repeated in the chants of the Avresti, in the old Assurai tongue. “I can purify it only so much with holy smoke, but true purification is farther still.”

Kalpana expected an accusatory stare from her sister, but none came. All eyes were downcast.

“Are the gods angry, then?” Kalpana asked.

The stares came then, from Nishtha, from Aunty Veena, but not from Aunty Elda, whose eyes said so much without saying anything at all.

“I can’t presume anything like that,” said the priest. “The will of the gods is the will of the gods. I am just a messenger for the Avresti.”

“And what’s the message?”

“A Three-Way Penance is required, else this house will be ostracized from the Assuran Council.”

The priest left. The voices of the Avresti hung in the air, briefly, like the dying smoke from the kamandal, and then faded.

“It was inevitable,” said Aunty Elda, her knees crumbling. “I’ll have to go atop the Torussa Hill and complete the Three-Way Penance.”

Kalpana ran up to Aunty Elda before the others could react. She cupped the old woman’s elbows in her palms and helped her gently but firmly to her feet.

“No,” she said, her voice tinged with determination, and only the slightest hint of rage. “It’s on me. I’ll do it.”

“Kalpana, what are you talking about?” said Nishtha.

“It’s only fair,” said Kalpana. “Why must Aunty Elda bear the burden of something she wasn’t going to do in the first place? Intention matters, doesn’t it? In the end, even if she went for the fish, I was the one who bought it. I was the one who used the tongue. I touched the fish first. She stuck to her faith. The rest, as I have always said, is a mere technicality.”

“The gods don’t differentiate between technicalities,” said Nishtha, stubbornly. “If you fail the Three-Way Penance, both our houses will be severed from the Assuran Council. Do you have any idea what that would bring upon us?”

“Kalpana, you have your entire future ahead of you,” said Uncle Prabhu. His voice was soft, but heavy. “Next year, you’ll be inducted into the Jehervan Bastion. You must train for that. You don’t have to do this.”

“Uncle Prabhu, I’m young and that’s exactly why I’m doing it,” said Kalpana. “Whatever the Penance throws my way, I can take it.”

Her words danced in the air, the fading tenor of her voice glacially settling in the space between unspoken thoughts and the hushed murmurs of the outside world.

• • •

On the day Kalpana began her pilgrimage from the base of the Torussa Hill, the seas roiled and churned, and the season of the Karantha fish came to an end. The ports were closed as a storm warning was declared in Wakhi. The roads were slick with froth and the dying throes of tides both high and low. Harsh, unforgiving winds from the west threatened to uproot trees, branches cracking and groaning, twigs and leaves splattering the sky like so many birds.

Then came the rain.

The first third of the climb was the hardest. Kalpana’s feet kept sinking into mud, and her walking stick broke in half. As the rain fell in gray sheets all around her, the path became invisible. Her face wet, she soldiered on, blinking away water relentlessly. When her right foot fell hard on a sharp, tear-shaped stone jutting out of the mud, her thigh muscles flared with a searing pain that shot up to her hips.

She stopped to rest. For a passing second, she felt like Auntie Elda, thinking the gods were testing her. That's what Auntie would have said, had she agreed to make the perilous climb. But now it was up to Kalpana to prove. To prove that she could make mature decisions, born of empathy for her loved ones. Kalpana's mother had taught both her and Nishtha the tenets of sacrifice, and what it meant for those you loved. What tradition truly meant. And no, Kalpana had not ruined any tradition, she had not broken any rule. Yes, she felt rage at the blindness of it, the cruelty of it, but she was also curious. Why were things the way they were?

The rains came down harder. She reached inside for the withering stores of Jehervan sorcery and channeled warmth. Immediately, the wetness on her face diminished, and she felt a cozy cloud overtake her body, shielding her from the torrential rain.

She continued her journey.

Two-thirds of the way, Kalpana saw a mirage on a murky pond. She saw Nishtha, laughing at her, chiding her for always being so stubborn in her ways, and she saw her mother and her father and her uncle and her aunts, sitting around a campfire, sharing tea and stories. Her energy had depleted, and all she wanted was to go back home. To apologize to everyone. She was wrong in thinking that she could correct everything. She would accept her folly, if only she could get a warm bed.

But she had to do it. For them. And so she soldiered on.

An hour later, when the magical cloud engulfing her dissipated, she saw sun peeking from behind actual white clouds. The rain had stopped and the sky looked baby-new. In front of Kalpana, a muddy trail ascended all the way up to the summit, to the Temple of Illar, a cracked stone finger pointing to the sky, its base a clenched fist. Stone steps were etched into the face of the mountainside, merging finally with the first marble steps of the temple.

The last leg of the climb was steep, but it was meant to be. A final test.

Kalpana stumbled and clawed her way to the temple steps, her knees bruised, her will shattered, but not completely gone. She collapsed in a puddle of limbs on the cool marble and stayed there, breathing softly, for a while. Then, from the corner of her eye, she saw naked feet approaching her.

She looked up. The kind, gleaming face of an Avresti gazed down upon her. She struggled to her feet, but when she stood up, she only came to the waist of the chosen Priestess of the god Illar.

“The last time someone came for a Penance, the other moon was still intact in the sky,” said the Avresti. “And you are just a child. What did you do?”

“I thought...” Kalpana struggled to form words. “I thought you knew.”

“As an Avresti, I have my eyes everywhere, right from the shore of the Wakhi to the deserts in the North. Sometimes we tend to miss things.”

“The Karantha,” said Kalpana. Then she told the Avresti everything. Kalpana was surprised at the savagery in her own words, the rage at the helplessness of her family in the face of traditions thrust upon them. When Kalpana was finished, the Priestess grabbed her arm and ushered her inside the temple, fiercely but also gently. The interior of the temple compound was just a bare, squarish space. Right at the center of the compound simmered the fire that wasn’t a fire. Red-gold ribbons swayed and fluttered like tree branches against an absent wind, sprouting from the cold marble beneath. The physical manifestation of a god.

There was no flame.

“A wrong has been done,” said the Priestess. “I sense a desperation in you, Kalpana, to prove what you think is just. What *you* think is right.”

“I think I am,” said Kalpana, her throat dry and itchy. “And I stand by my decision to use the tongue and to help my Uncle survive.”

“Do you know why the Karantha is forbidden to the Assurans?”

Kalpana shook her head. The Priestess sighed.

“The Karantha is a creature that feeds on unnatural organisms that grow on the Wakhi seabed. The original inhabitants of Wakhi ate the fish, and it immediately consumed them. Madness came upon them and they fled the lands clawing at their faces. The Karantha *changes* the Assuran body from the inside, irrevocably, because their bodies aren’t designed to handle it. While the second-generation Assurans understood the transformation, the science got lost in the tales they told. But when the veranga liquid was invented, it took away all those poisonous properties of the fish, making it

palatable for everyone, even the Assurans. Yet, the myth of the transformation still remained, and the Assurans clung to it, obstinately.”

“What about the gods?”

“Gods couldn’t care less about what you eat. I must confess, we the Avresti *are* at fault for not caring enough about what goes on down there. We see too much sometimes, too little at others.”

Relief enveloped Kalpana like a warm embrace. There was, after all, some justice in the world.

“Kalpana, change will be slow. I must confer with the other Avresti for an exception regarding the Karantha and its consumption. This is a small thing, but even so it won’t find acceptance soon. When you go down, you have my permission to say that you completed the Three-Way Penance. There is, however, one more thing.”

“And what’s that?”

“You did commit a crime, practicing Jehervan sorcery on an innocent individual. That act was done against his will, even if your intentions were pure. To exercise your choice, you took away another person’s. That wasn’t taken lightly by the gods. I must ask you for a sacrifice and that will be your true penance.”

Kalpana closed her eyes and took a deep, cold breath. Overhead, the sky turned white.

• • •

Nishtha wasn’t ready with an I-told-you-so when Kalpana returned with her ability to channel Jehervan sorcery permanently severed, and her voice taken away. Instead, she pulled Kalpana into a hug. Both sisters stood on the porch for a moment stretched to eternity, one cohesive unit. Later, when they broke apart, Kalpana spat out two long strands of her sister’s hair that had clung to her lips. Nishtha smiled weakly, then took her hand.

When the Assuran Council eventually came to their house, they didn’t come to sever their ties and refuse them food rations and water. Instead, they came to pay their respects to the girl who had Spoken to a god. They

came to listen to Kalpana utter the Avresti chant, a deep, resonant hum of six Priests and Priestesses. They had come to listen to the girl who had completed the Three-Way Penance while braving a storm.

For a whole year, the Avresti chant was the only sound that came out of Kalpana. For the most part, she remained quiet. Quiet brought about solitude, and solitude brought about perspective. Perspective soon gave way to understanding.

Her voice came back a year later, on a bright morning at the cusp of the Karantha season, when the Wakhi seashore was once again beginning to plunge itself into madness. The first word she spoke was the name of her sister while she was preparing the morning tea. Nishtha came into the living room, her eyes brimming with happiness.

“Oh, my dear child, you did it,” Nishtha said, her voice taking the grave happy-sad tenor of their mother.

It was a day of celebrations. Uncle Prabhu, Auntie Elda, and Auntie Veena spent the evening at Kalpana’s place, eating a nice brinjal-potato curry simmered in spicy tomatoes, along with fragrant coriander rice, listening to Kalpana narrate her encounter with the Avresti in her own words at last. When Kalpana was done, it was Auntie Elda who spoke first.

“Kalpana, you are so brave,” she said, her voice choking up. “How will you go to the Jehervan Bastion now? Your sorcery stores have all been taken away by the gods.”

Kalpana let out a sigh. “I don’t want to anymore,” she said. “I’d much rather remain here and help the Assurans. Maybe one day become a part of the Council itself. It’s what Mother wanted, after all.”

She looked at Nishtha, who had an inscrutable expression on her face. But Kalpana could tell Nishtha didn’t feel like an elder sister. They were equals now, forever, in heart and in mind.

“I feel it’s partly my fault,” said Uncle Prabhu after a while, his voice a low whisper. “If only I had been a little more careful on my travels, I wouldn’t have contracted the Boromi. None of this would ever have happened.”

“No, Uncle,” said Kalpana, softly. “The world is only richer because you are in it.”

Kalpana took her uncle’s palms and blew gently on them. Her stories were his now. Uncle Prabhu’s eyes brimmed with tears that refused to fall. Then he smiled, and shared a story of laughter and longing. When he finished, silence brewed around the group, a gentle silence of a shared tragedy and of a shared history, the pre-trade silence of the Wakhi shore, the silence of the sky before dawn, the silence of the sky before the first chirp of a bird, the silence of the land before the first footfall.



ON THE PLANET OF THE LOBSTERS

Anya Ow was born in Singapore, and now lives in Melbourne as a graphic designer with her two cats. Her short stories have appeared in venues such as Asimov's, Lightspeed, and Fantasy Magazine, and this is her first appearance in F&SF. Her latest book, the space opera Ion Curtain, was published last year. "Longevity" was inspired by Singapore's attempts to adapt to climate change as a tiny equatorial island country, and imagines the future of human usefulness and existence.

Longevity

By Anya Ow

On the morning of my 150th year as a working adult, I disposed of my fifth pet cat. Loki had died peacefully during the night, after a statistically average twenty years as an indoor cat, walled into my statistically average apartment and consuming a diet of brown nutritional pellets. He'd lived a perfectly average life with imperious disdain. I burned his body in the EcoSave™ Incinerator in the basement of our building, which accepted organic and Grade 1-4 waste materials. There was no option to receive his remains, but since I had no receptacle or space to keep them in and nowhere to scatter or bury them without incurring a fine for littering, this was a relief. I returned to the start of my interrupted day cycle to get ready for work.

“Morning,” Eleeza said when I logged into WorkFlow™. She had not manifested an avatar today—she didn't usually care to on Tuesdays.

“Morning,” I said. We'd exchanged the same greeting at the same time, five days a week, for over fifty years. We were the lucky ones. We had corporate value. Corporate value kept distilled water piped to our apartments, kept our Nutro™ drips running, and constantly updated our enhanced cellular structures. I preloaded a new mobility patch for my knees as I brought up the first Accelerated Customer Claimant of the day.

Kasey Huang Shimin was currently 15 years, 8 months, 2 days old. No savings, no permanent employment, and one parent performing contract-based assignments as an obscenity moderator in LifeStream™. Soul-destroying work: work that algorithms still could not reliably replace. Kasey was appealing a vandalism charge. She'd tried to hack off her Plasma Redistributor with a kitchen knife.

I connected to Kasey's Claimant ping. “Hello, Kasey,” I said.

Kasey threw a neurological spike of emotion-language in response, which my Workflow™ rig quickly dissipated. I waited. After a few minutes, Kasey uttered a string of abbreviations and slang terms that the rig parsed into: “Mum made me call. I didn’t want to.”

“How can I help you today?” I asked.

“You a real person or a bot?”

Usually, I would have flicked Kasey away at this point to the AI chatbot. It was clear that she wasn’t interested in resolving her claim. At the other end of the ping, I could sense-see her mind, a coiled mass of inchoate resentment. Common for UnEdited people, especially people Kasey’s age. Today I said, “A little of both, Kasey.”

“Both?” Kasey was intrigued. “How does that work?”

“I am a human imitating a bot. You can talk to me however you like, but all the responses I can give you are predetermined.”

“You’re trying to tell me that I’m wasting my time,” Kasey said.

“Not at all. Time is a resource without value until it is valued.” My time was valued based on how many Claimants like Kasey I could process per hour, but I’d ceased trying to upkeep its value twenty years ago. The Company could replace me, but having to retrain someone into even my plateaued level of performance would cost resources they didn’t need to spend.

Kasey laughed. “So, you’re saying that I’m not wasting my time because I’m not worth anything.”

“Not yet,” I said.

“Hilarious. Typical. What’s your name, Human-Bot?”

“Can’t you see it from the ping?”

“Obviously can lah, but I want you to tell me. What’s your name?” Kasey asked.

“Ruhe.” It had been a long time since I’d had to say my name to another human. Workflow™ and LifeStream™ automatically made introductions to strangers.

“Cool. This can’t be normal for you. I’ve talked to Claims before—you people usually shunt me straight to a bot. What happened to you today, Ruhe?”

“My cat died,” I said before I could help myself.

There was a long pause, so long that I had to check whether Kasey was still online. “Oh. I’m sorry to hear it.”

“He was old. He’d had a good life.” The roteform responses were tumbling from me. This was the fifth time, my fifth cat. I would get a sixth, a seventh, more. Cats were how I marked the forever stages of my existence, hidden from a world that was growing ever warmer, ever more underwater.

“You’re still sad about it, aren’t you?” Kasey asked.

Was I? I had been prepared for Loki’s death for a while. He was old and slept often. He had stopped grooming himself with his usual enthusiasm, instead spending most of his days lying in a tired stink at the foot of my PodAccess Terminal®. He lived only to eat, heaving himself onto unsteady paws when I woke from work to feed him. Feeding was the only part of the pet-ownership process I had not automated. The cat loved me because I fed him, because he had no choice. The life he had was mine.

“I am,” I said.

“I wish I could have a cat,” Kasey said, wistful. “No pets in communal housing, though. I could probably hide one, but I couldn’t afford to feed it.”

“You can reconstitute cat food out of any Replicary, even the basic ones. You just need to know the numerical codes of the nutrients they require. If you like, I can send you the ones I used for Loki. Just in case you someday get a cat,” I said.

“Sure thing. Loki? Cool name. From the films?”

“Not really.” Ever since Disney had finally cracked the final frontier on hologram and voice technology, they no longer needed to pay living actors to create their films. Don’t get me wrong, the sequels are entertaining, but I lost track of the last plot twist eight years and seven iterations ago. “Do you want to talk about the vandalism charge?”

“Oh, that. It was nothing lah.”

“You had to go to the hospital. I don’t know if it was nothing,” I said, bringing up Kasey’s medical files. She’d had to be warded for days.

“Woi, I wasn’t trying to kill myself if that’s what you mean.” Kasey sounded defensive.

“I didn’t say that, Kasey.”

“It’s just. This goddamned plasma machine, sucking bits of me out to feed to the rich? It’s just. Too fucking much, isn’t it?” Kasey’s voice-impression intensified into a psychic shout. “They already eat me and my mum on everything else, on the rent, on the fucking insurance, she can’t afford a fancy work-from-home pod so she has to travel to the Commune, and that’s money, once she scratched a pod, just a little scratch, it was an accident, and now she’s got to pay interest on the damage on top of what she’s done and I’ve got to pay interest on my fine and—” Kasey took a deep breath. “It’s fucked, it’s all fucked. Sorry.”

“Don’t be sorry. You’re right to be angry,” I said.

“You really are a bot, I think.” Kasey let out a shaky laugh. “After all that, you just say, ‘Don’t be sorry, Kasey. I understand, Kasey.’ Only a bot would come up with that.”

“What would a human say?”

“I dunno leh. A human handling Claims would probably be one of the Forevers. People who keep getting updated biosystems ’cos they’re useful to a company. I’ve met Forevers. My uncle is one. They don’t care about other people’s lives. Something goes funny in your head when you can live forever.”

“Funny how?” A red light was starting to blink in the corner of our Flow as the disputes algorithm tried to get me to hurry up. I ignored it.

“Living longer’s always been the ultimate privilege. Whether it’s ’cos you’ve got money, or ’cos the cops don’t bother you, or you just happen to be more useful to a company alive than dead.”

“Sorry,” I said. I wasn’t sure what else to say. I glanced at the script on the console before me, but nothing appeared appropriate any longer. “How

else may I help you today?”

“Running out of time, huh?”

“Yes.”

“Tell you what. Log in my case however you like. I don’t care. Do it in the way that gets you the most corporate points or whatever. In exchange, how about meeting me for lunch?”

“Why?” I asked, surprised.

“Just curious whether you are or are not a bot.” Kasey hesitated. “Don’t worry, it’d be somewhere public, and I won’t record your face or anything.”

“Fine,” I said, instead of shunting Kasey off to AI like all the other “problem” customers. “My break is at one.”

• • •

Kasey turned out to be a tiny girl with hair cropped down nearly to her skull. Her heat-regulating suit gleamed with corporate logos down the spine. One of the cheap models, it’d still do its job, allowing her to walk around outdoors in a world that had long stepped past the Redline at the equator. UnEdited people would die otherwise at this temperature with the humidity so high, boiling alive within their skins.

She looked vigilantly up at me as I approached, first frowning, then smiling as I stopped at a respectful distance. “Ruhe?”

“Yes,” I said.

“Damn, you *are* a Forever.” Kasey looked me up and down, no doubt taking in my silvery skin and silky hair, currently flickering between blue and orange. Encased within mods, I couldn’t feel temperature extremes and had chosen to wear a long tan coat, a long silk scarf, and jeans. Improbable clothes in this climate for anyone without the Edits.

“As you guessed,” I said. My internal clock, set to City Time, told me it was 1:04 p.m. “Hungry? My treat.”

Kasey chose Lau Pa Sat, one of the few colonial-era buildings still preserved in Singapore. I liked Lau Pa Sat, despite its increasingly anachronistic existence as one of the many gravestones that marked the arc of history. Structurally unsuited to the climate from the very beginning, for centuries such buildings rotted from within and without, their maintenance expense a testament to futility. The first market built in Singapore by the British, Lau Pa Sat's intricate cast-iron structure had been made in Glasgow and shipped to Singapore centuries before Redline. Repeatedly deemed unsafe due to poor construction using atap and timber, its original form had been remodeled into its current octagonal shape and eventually relocated.

Crowded at lunch, we somehow managed to find seating by one of the pillars. Kasey flicked through the menu on the holodeck and glanced at the "stalls" that ringed Lau Pa Sat. Once, they would have been manned by people, each working long hours for little pay, their crafts destined to die out with the advent of replicators and the cessation of pre-Redline forms of mass agriculture.

I only needed to eat once every forty-eight hours with my efficient processing system. I ordered a cup of teh tarik and a plate of kaya toast, which arrived browned and hot with a small plate of soft-boiled eggs. Kasey's bowl of dry, extra-spicy bak chor mee came soon after, served also by drone. As she mixed the noodles, minced pork, mushrooms, and chili, she gestured at my plate of eggs. "I hear those used to come out of a chicken's ass."

"They did." I shuddered. Pre-Redline forms of agriculture all sounded either unsanitary or unnecessarily cruel, or both.

"I heard they threw male chicks—that's baby chickens—live into mincers. Because they don't produce eggs." Kasey laughed as she popped a pork ball into her mouth. "Efficient."

"The condensed milk for a cup of teh like this was harvested by separating calves from their mothers," I said, dipping a triangle of toast into the egg. "While the pork you're eating came from animals that were smarter than dogs, yet kept in cramped and filthy pens, fattened for one purpose. So it was. But hardly anyone could afford to buy only ethical produce. Even if they cared. Is that your point?"

Kasey looked amused. “My uncle’s like this, too. Well, technically, he’s my great-great-uncle. He’s lived for so long that he thinks he can predict the beginning and end of what people are going to say, so he just interjects all the time.”

“Sorry,” I conceded. “I’m out of practice.”

“At talking to someone? Isn’t it your job?”

“I don’t talk to people outside my job.” I paused. “I talk to my cat.”

“Oh, that’s right.” Kasey sobered. “Sorry about Loki.”

“It’s all right. I’ll get another one. What were you going to say? Before I rudely tried to guess.”

“Don’t you think human society is like a chicken farm?” Kasey inhaled the rest of the pork balls in her bowl as I frowned.

“How so?”

“The useful ones get to stay and grow old forever, laying eggs for the greater cause. The not-so-useful ones get ground out sooner or later.”

“If you’re looking to become a Forever, the company I work at has internships,” I said. Notoriously difficult to get into, but not impossible.

Kasey scoffed. “My uncle offered to help, and I said no. I like the life of a discarded chicken.”

“So why did you ask me to lunch?” I asked, puzzled.

“Do you know how many times I’ve had to call in a Claim?”

“This afternoon was your eighth.” Kasey was a serial offender.

“That’s right.” Kasey drank a spoonful of oily soup. “And the seven times before that, I got shunted to bots. I guess I just wanted to talk to the one person who did something different.”

“Oh,” I said, then, “Shouldn’t you be at school?”

“Shows how long you’ve been alive,” Kasey said, giggling. “No such thing as a physical school anymore. Besides, it won’t matter. A person like me will be going into the mincer sooner or later.”

“I don’t think you’re that bad.”

“Doesn’t matter whether I am or not.” Kasey gestured at me. “I don’t want to live forever.”

“Oh,” I said, surprised. I’d never heard of anyone actively not wanting to be a Forever. “But every form of meaningful occupation would require you to become a Forever.”

“You think what you do is meaningful?”

“Useful,” I corrected with a wry smile.

“I think most of the things we do lack meaning. We used to look forward—maybe—to retirement or death, but now we don’t even have that. And if we don’t want to work forever and evermore at the same job, they just fit us with plasma suckers and milk us until we die.” Kasey watched me finish my egg. “Chickens in another battery farm.”

“So, think of a way to do something else.” I flicked her a file. Kasey glanced through it then stared at me in surprise. “I’ve taken the liberty of booking you in for an appointment to remove your Plasma Redistributor tomorrow for medical reasons. In addition, I’ve made you eligible for compensation, payable monthly. It appears that the original installation scan failed to notice that you were allergic to the device.” I had lied on the forms, a career first.

Kasey read through the file again and closed it. “You...you didn’t have to do that,” she said.

“It was nothing.” The first time Kasey had tried to pry off her Redistributor with a knife, she had been eight. I did not remember what I had done when I was eight. “Live well.”

Kasey chased me out of Lau Pa Sat. “Hey, can I talk to you again? Maybe after you get your next cat.”

“Sure.” I passed her my contact code and went back to work. The third day after we met, I purchased a tiny ginger kitten. I almost sent Kasey a note, only to delete it at the last moment.

• • •

Fifteen days after the death of the sixth Loki, Kasey sent me a message. We met at the edge of the Mangrove Ring, the band of forest that surrounded most of Singapore, one of its frontline buffers against the rising tides. A walkway fed from the observation center into the forest, and Kasey waited for me just within the shade. Twenty years on, she was taller, tanner. Her grin was just as reckless as ever.

“Sorry about your cat,” Kasey said.

I nodded. It would not have been a significant issue if the government hadn’t now banned animal cloning for recreational purposes, making it near impossible to afford a new cat. Waking up to an empty apartment continued to be unsettling. “Thanks.”

Kasey motioned for me to follow her into the shade. Humid and damp, the bioengineered mangrove forests created a microclimate around them that was several degrees cooler than the city-state it bordered. Mudskippers darted out of sight from where they rested against the roots jutting out of the wet soil, dwarfed by the spikes. The trees were far larger than their original form, bioengineered to withstand the swallowing sea.

“How have you been?” I asked as we walked.

“Pretty good lah. Have you been keeping tabs?”

“No. That would be a violation of your privacy.”

“I’m a park manager. Every day I get to walk around the forest, scold people for littering, and locate lost little kids.” Kasey waved at the trees. “It’s a good life.”

“If you like it, you probably qualify to become a Forever,” I said. Park managers were another form of work that hadn’t yet been automated.

“I agreed not to when I started.” At my startled look, Kasey snickered. “Turns out not everyone thinks immortality is a bonus.”

“How so?”

“National Parks has two policy benches, one comprised of Forevers, and one of the UnEdited. To make long-term and short-term policies.”

I began to speak, but a troupe of monkeys swung past, pausing as they recognized Kasey. One dared to drop to the walkway, sidling closer

ingratiatingly, but when Kasey merely made a gentle shooping gesture, the troupe eventually left in disappointment. “They’re not meant to eat snacks,” Kasey said.

“Meaning, you’ve been feeding them some on the sly?” Still a serial offender.

“Nothing bad for them.” Kasey wasn’t even repentant.

“Are you happy?” I asked.

“No complaints.”

That didn’t sound like happiness. “When I arranged for the compensation to be paid monthly, it should’ve been enough to guarantee you a comfortable living for the rest of your life without having to work.”

“I saw that,” Kasey said. She flashed a smile. “I’m still thankful. It’s why I’m doing this—I’m paying it forward.”

“By being a park manager?” I couldn’t quite compute.

“I talked them into taking on the team of UnEdited. Before that, all the policies had KPIs—sorry, milestones—measured in the decades, centuries. I wanted to do something I could see in my lifetime, rather than just help push the boat. Pushing the boat is why we have Redline, after all.” Radical amendments to global climate policy had been delayed so long that it was too late to stave off all but the most catastrophic change.

“Why did you invite me here?” I asked. We hadn’t spoken since Lau Pa Sat.

“I just thought you might want to check in. See how I’ve been paying off your investment.”

“It wasn’t an investment.”

“Call it what you will. Did you see the mudskippers on your way in?” When I nodded, Kasey lit up. “Didn’t you notice anything different about them?”

“No? I’ve never seen one before.”

“Ping them,” Kasey urged.

I closed my eyes, concentrating. The bioengineered flora and fauna in the city were all digitally tagged, both with educational information and with instructions on what to do if they were found dead or damaged. The trees glowed in my vision as I sent out a querying pulse, each telling me their dates of birth and welfare status. Tiny fleeing dots represented the monkey troupe disappearing into the distance, and another marker revealed a toucan close by nestled on a branch.

The mudskippers—nothing.

I met Kasey's gaze, one that burned with joyous fervor. "They're UnEdited," I said.

"The first of many." Kasey set her hands on her hips, looking out proudly over the sea of muddy roots. "Lunch?"

"My treat."

• • •

Kasey waved at me from the corner of the cloud of press drones as I exited the clinic. Ignoring the drones' frantic pings for soundbites, I hurried toward her, stumbling only once. My de-integrated legs with the KneeProtective™, CalciumSupplementation™, and BalanceFortitude™ mods taken out were going to take some getting used to. They ached dully through the drugs.

"How is it?" Kasey asked, looking me up and down worriedly.

"Hurts all over."

"I didn't think you'd be interested in removing all your edits."

"I wasn't the only Forever in the waiting room," I said, though I was the oldest by over a century. De-Editing for humans was new and likely would always be voluntary. Pity. Stolen immortality was such a violent thing.

"So, why?"

"Look at your world," I told her. Three decades after the death of Loki the sixth, mangroves occupied the tracts of land between the clinic and the residential blocks. High tide hid their spiked roots under a blanket of murky

water, bisected by the occasional silvery fin. The air felt as cool as it would indoors, the humidity no longer so murderous. All this had only been possible through the urging of the National Park's policy teams—both teams. "It's so beautiful. I want to live in it, not above it."

"That was what made you want to give up eternity? I've got mixed feelings now." Kasey had aged well, growing only slightly stooped as her hair turned completely silver.

"A long time ago, you wondered whether I was a bot," I said as we walked. The pathway we took wove between the trees. An otter family slid from the path into the water as we approached. "I wasn't always too sure myself at the time. What the difference was, given the life I led. Now, I can be."

Kasey squeezed my palm. The touch of her hand was sticky and hot. "That's good."

"Why, you thought I did it for you?" I teased. "Louisa would be so jealous."

"Shut up. She won't care." Despite her age, Kasey stuck out her tongue. "Also, we've been keeping her waiting."

We picked up the pace. The path we walked led, eventually, to Lau Pa Sat. The overgrown vines latticed over the cast-iron frame enveloped the clock. Louisa waved at us from a table near the entrance, a small duffel bag at her feet. As I sat, she said, "How was it?"

"Didn't die," I said and smiled. "Not yet, anyway."

Louisa pulled a face. "What lah. You're still so weird."

"Did you think that would change?" I asked.

"Here." Kasey gently picked up the small bag. It had mesh on either end, and as she passed it to me, it mewed softly. I blinked. "A present from us. Loki the Seventh."


"I thought..." My voice shook. The tiny brown kitten looked up at me, its eyes huge in its rounded face.

"She isn't cloned. I have a friend in the zoo. Granted, she might be a bit of a pain to upkeep now that you can't buy commercial cat supplies any

longer, but—”

“I love her,” I said, interrupting Kasey. My eyes welled up, blurred with tears for the first time in a century. “Thank you.”

“Don’t cry, or we’ll both cry, too.... Hey, what do you want to eat? Let us treat you this time. Kaya toast? Kway teow?” Kasey asked.

“Dry bak chor mee,” I said. We’d met half a century ago, and yet it was no time at all to me. Now, that could change. “Extra spicy.” 

Charlie Hughes lives in London, England where he writes horror and dark short fiction. "All That We Leave Behind" is Charlie's second story to appear in F&SF. "The Collection" (July/Aug 2022 edition) was recently selected for reprint in the Ellen Datlow edited Best Horror of the Year, Vol. 15. Further horror tales from Charlie out in 2023 are "Fell Mill" in Horror Library Vol. 8 and "The Motley" in Fiends in the Furrows III anthology. You can find Charlie on Twitter at @charliesuspense and a full list of published stories at charliehugheswriting.blogspot.com.

All That We Leave Behind

By Charlie Hughes

The room sleeps under gauzy half-light, fed by streetlamps dimly peeking through curtains. After a bang and clatter from beyond, a hand reaches through the doorway and flicks the switch. In halting moments, like a film missing frames, striplight banishes the dark.

A man in loose black jeans and a leather jacket enters. Mark Chamberlain has shoulder-length hair, tamed with wet gel. His skin is pale, with pink blotches across his nose and cheeks.

Mark pulls chairs from their stacks, clattering, scraping metal legs on the dusty floorboards. He is heavysset, in a paunchy middle-aged way, clumsy in his movements. He heaves seven plastic seats into a circle, then pauses, breathing heavily, hands on his hips.

He slumps into one of the seats, beads of sweat blossoming on his brow. Unattended, droplets grow and cascade over his face, like tears.

The large noticeboard opposite him announces a variety of activities: Pensioner Pilates on Tuesdays, Cub Scouts on Thursdays, Brownies on Saturday mornings.

Mark's poster, the one he designed on his home PC, sits under "Mondays." The banner declares "Shipston Lit Club" accompanied by multiple overlapping photographs of people smiling, standing together, invariably presenting a book or a raised thumb to the camera. One shows Mark holding a copy of *Day of the Triffids*, his spare arm draped around the shoulders of an elderly man wearing an orange cravat.

The club is Mark's baby, set up six years ago at his wife's urging. He needed an activity outside of work and home to hold his interest, she said. They've covered a novel every fortnight since. Mark posts summaries of their reviews on a blog which is moderately well read among the town's inhabitants.

He walks over to the poster, takes one corner roughly in his fist, and tears it from the wall.

Disturbance from the outer entrance heralds companions for Mark. Three crouched figures, Shona, Olisè, and Jed, enter. Like Mark, they look tired, sullen. Jed has a food stain down the front of his sweater and Olisè's brow furrows as she sees the void on the notice board. She is parent to a child in the same class as Mark's son. They are friends, in the way parents can be when their children force them to interact. Mark persuaded her to join the group a year ago. She has brought new energy and ideas, proving a strong advocate for modern fantasy and sci-fi.

All three drop heavily into their seats. Jed sits next to Shona as if they are still a couple. Mark knows they split months ago.

None of the arrivals says a word, not even a cursory greeting.

Mark leans forward, opens his rucksack, and reaches inside.

"Already?" Shona asks. Her voice is breathless, panicked.

"What is there to wait for?" Mark says.

"The others," Shona replies. "Shouldn't we wait for the rest?"

Mark removes his hand from the bag and sits back. They wait. Silent.

Minutes later, an elderly couple enter the room. Joyce and John. They are Mark's silver stalwarts who've attended every meeting since the club's inception. John sports his trademark orange cravat, shoddily tied, one end poking out beneath his shirt. Joyce is wearing oversized jogging pants and a pair of slippers; her feet slip-slide across the floorboards with sandpapery coarseness. The pair sit, leaving just one chair empty.

A bright, cheerful voice comes from the doorway. "Evening, peeps!" This is Tony, the newest member of their literary circle. Mark thought him too cocksure on first impressions, an opinion that has stuck. He believes Tony is only attending the group because he has designs on Shona.

"How are we all doing?" Tony says, settling into his chair, beaming a smile around the circle.

The others say nothing. Tony holds out his hands in mock confusion. "Ooookay," he says, "have I walked into an argument or something?"

The absence of communication weighs on them, threatening to tell their secrets. Tony makes an “Uh” sound, suggesting his expectations for tonight’s meeting have hit a brick wall. He quiets, and the group looks toward their leader.

“Shall we begin?” Mark says.

There are slow, reluctant nods from around the circle. Tony is fidgety, looking back and forth at the rest. From coat pockets and bags, the others retrieve their books. The volumes are all the same, no variety in editions. Taking the hint, Tony produces his own copy.

Mark rests the novel on his lap. It is one of those books with a cover that is too shiny, slightly taller and wider than the novels you see in shops and libraries. When he first picked it up earlier in the week, Mark assumed it was self-published. The cover is completely black except for the title, declared in bold white capital letters: *ALL THAT WE LEAVE BEHIND*.

No author is listed.

Mark turns and says, “Well, Tony, what did you think?”

Tony shuffles in his chair. “Look, hands up, guys. It’s been a busy week. Work is mental.” He waves his hands in front of his face, acting out the concept of busyness.

Met only with blank stares, he continues, “Seriously. I’ve only had time to dip into this. Better off starting with someone else, someone who’s taken a deep dive.”

In a flat, neutral tone, Shona says, “You haven’t read the book, have you?”

“I’ve skimmed, if I’m honest.” He shrugs. “Why don’t we start with the person who suggested it last week?”

Mark considered this earlier, but he can’t recall who wanted them to read the book, nor how he obtained a copy. He remembers discussing options and the unanimous agreement that it should be this book, but the details are lost. He looks around the circle waiting for somebody to own up, or even remember. Shona shakes her head. The other faces are blank.

Mark takes a punt. “Olisè, would you begin?”

She clears her throat. “Yes.” Olisè sits up in her chair and draws in a deep breath. “I have never read a book quite like this.”

The group murmurs ascent.

She goes on, “A life story, a lesson, and a secret, all rolled into one.”

“Well put,” Mark says. “Let us take the first of those—the life story.”

Olisè nods “I found it...inspiring. A boy, who grows to be a man, who comes to appreciate his true nature, understanding his purpose. When the book starts, the boy’s name is...” She chuckles. “It’s so ridiculous that he has this name. He is called ‘Eric.’”

Several of the others laugh, too. Joyce joins in, then claps her hand over her mouth, like a child accidentally uttering a profanity.

Olisè continues, “But he doesn’t remain an Eric for long, does he? He starts to understand the world and his own importance. His time in the army, working in the café, traveling the globe on fishing boats. His experiences give him insight into how the universe works. At the start, the book skirts around the supernatural, hints but never declares it outright. Then, there is *that* scene, halfway through, when he discovers how powerful he really is. It is difficult, of course. I struggled—”

“Yes, it was hard to read, at first.” The words tumble from Mark’s mouth, unbidden, unplanned, and yet he knows them to be true. “The scene in the hospital with the elderly man presents a moral challenge to the reader. I wanted to stop reading because, according to...” Mark pauses, trying to find the right phrase. “According to a more widely accepted view of the world, he is committing an appalling act, an abomination. But I’m glad I kept on. So glad.”

More murmurs of agreement from the others, except for Tony. He rocks back in his chair, his nose wrinkled in mock confusion. “Aren’t we all taking this a little too seriously?” he asks. “It’s only a book, right?” Tony holds out his hands to them and laughs as if he expects the others to laugh with him. “I mean, let’s keep some perspective.”

“What are your thoughts on it, Tony?” Mark asks. “Did you understand the scene in the hospital?”

Tony smiles around the group and shrugs. “Yeah, yeah, ’course. It works on several levels. Very meta.”

This comment is greeted with shifting and shuffling among the group, as if Tony’s words have made them physically uncomfortable. After a moment, Joyce begins crying. A low, groaning sob. She drops her book on the floor and doubles over, placing her head in her hands. Her husband makes no move to comfort her, instead fiddling nervously with his cravat.

Only Tony reacts. “Err, are you okay?”

Abruptly, she stops crying and looks up at him.

“You didn’t read the book!” Joyce hisses these words with such hatred, such poisonous venom, that she almost goes tumbling forward into the center of the circle.

Tony rocks back in his seat. “What is wrong with you lot tonight?”

“Do you think I *wanted* to read it?” Joyce asks.

Tony leaps to his feet, shaking his head. “You’re acting so weird. All of you. I’m not coming here again. Shona, I’ll call you. Everyone else, have a nice life.” He turns and walks from the room.

In the circle, they keep their eyes on the book.

As the exit door swings to-and-fro, none of them sees Tony walking into the hallway. If they turned and looked, they might glimpse the shadow cast at the main entrance, waiting for him, a tall and broad darkness, vaguely in the shape of a man.

They do hear Tony speak. To Mark, it sounds like, “I wouldn’t bother....” but the words stop so suddenly, he isn’t sure. Heavy shoes clip-clop on the wooden floor, followed by a loud cracking sound, like a large chunk of ice splitting. A screech of metal prompts Mark to imagine Tony’s slackened body hitting the table and chairs in the hallway. A heavy thud ends the commotion.

Minutes pass. Nobody says a word. Nobody expresses concern for Tony’s welfare. Each member of the group remains still, studying the cover of the book.

“So,” Mark says, “I was saying, the scene in the hospital is difficult, but I was glad I continued reading.”

“Yes,” Shona says. “Yes.”

“Because later,” Mark continues, “we understand why. With hindsight, I celebrated his bravery. It all makes sense.”

“Is it real, though?” This is Jed. After asking the question his mouth remains open, as if chasing after another. “Do you think it really happened, Mark?”

“Interesting,” Mark says. “Are we reviewing fiction or a true-life biography here? John?”

“Well. Errrr.” John clasps and unclasps his hands. “Real, I think. It all felt very real to me.”

Olisè says, “I agree. The power of this novel is its truth.”

Without prelude or warning, Joyce screams, a piercing, shocking exclamation that sweeps away the chatter. “What have we done?” she asks, arms outstretched, beseeching the others for an answer. “What have you all done?”

Her husband says, “You know, Joycey. You know very well. Stop making a scene.”

“A scene!” she exclaims. “A scene?”

Mark says, “Shut up. Both of you.” He looks to the ceiling and exhales. “Think about what you’ve read this week, think about the sacrifices made.”

“You do think it’s real, then?” Jed says.

Before Mark can answer, the door to the room opens again. They all turn.

A tall man with short-cropped black hair enters, but they cannot see his face. He keeps his head low and turns away quickly. He seems to be wrestling with the door he came through. A jingling metallic noise is followed by a “click.” The man steps away and turns toward them. The door handles are now bound with a heavy chain, secured with a padlock. The man has blood on his hands and around his mouth. Droplets of red drip from his fingers, freckling the worn wooden floor with dark rouge.

Joyce responds with a low-pitched moan; the others stay quiet. Shona is nodding, smiling.

Mark surveys the new arrival from the feet up: smart black leather shoes and khaki chinos, a blue sweater turned dark purple around the neck. Despite the blood, the man's face has a smooth, pristine quality, as if painted on. Mark cannot look at him for more than a few seconds. As a child, when his father arrived home from the pub, Mark would hide under the bedsheets, squeezing his eyes shut, praying there would be no knock at his bedroom door. The impulse is the same now.

He whispers to himself, "New truths, not old. New truths...."

Black shoes and chinos move toward the group. The Shipston Lit Club members turn back into their circle, and he sits in one of the free chairs.

"Of course it is real," the man says, picking up Jed's question from before. His accent is local. Not quite rural, not quite urban.

Mark clears his throat. "Welcome."

"Thank you."

"Are you from around here?"

"Sort of."

"You wrote the book, didn't you?"

"Yes," the man says.

Joyce stands and starts to move away.

"Where are you going?" the man asks.

"I need to go home," Joyce says. Her voice is small and weak. She does not look at the man.

"Sit down." He speaks gently. No anger, only quiet insistence.

"I want the toilet."

"Sit down, Joyce."

Joyce waits for a moment, as if considering her options, then sits.

“Mark thought it would be nice for your club to hear directly from the author, so he invited me.”

Mark can't remember doing this, but it may be true. The book has taken him outside of himself this week. It's been like watching a film of his life with crucial scenes removed.

“Thank you for coming,” Mark says.

“That's quite all right. I hope you enjoyed the book.”

Shona laughs, then clenches her teeth before more of the sound can escape. “It tells us secrets,” she says.

“Yes, that was my motivation. I needed to share some lessons. I'm not the first to know these things, but I don't think anyone has written them down before.”

“Like what you did to the old man in the hospital?” Shona asks.

“Precisely.”

“And the part at the end, when you die.” Shona again. “You saw those things? Really? You spoke to them?”

“I did. Every word is true. Think about it, all of you. What happens when you read a fantastical story? It can be diverting, of course. It can even contain a grain of truth. But it also requires you to give license to the writer, to suspend your disbelief. Did any of you feel the need to do that while reading my book?”

Mark and Shona chorus back, “No.”

“It was the other way around,” Mark says. “I tried to convince myself it *couldn't* have happened that way, all the time knowing it did.”

Mark cannot see the author, because he still can't bring himself to look directly at his face, but even so, he knows the man is nodding, pleased with Mark's contribution.

“I only saw them, ‘those things’ as you put it, Shona, because I made a choice, because I prepared myself. In a way, that's what the book is about. Preparation.”

“Please can I leave?” Joyce pleads with him.

“No,” the man replies. He continues, “Have you all prepared?”

“This seems jumbled up,” Jed says, muscle and skin twitching beneath his right eye. “Weren’t we supposed to ask you the questions?” Even Jed sounds unconvinced by his contribution.

The author replies with insouciance, “Reading and writing. Writing and reading. You read my book and now you are the authors of your own stories, are you not?”

Jed considers this. After a few seconds, his face crumples into a pained grimace. He is remembering something, coming to a realization.

The man stands and approaches Shona. His movement across the circle causes its own disturbance, a ripple among the club members. Chairs creak as weight shifts. John wraps his arms around himself and rocks in his seat.

The author places his hand on Shona’s head. She does not flinch or make any attempt to move away.

He says, “Did you prepare, Shona? Did you do what was necessary?”

Shona lets out a gasp, her hands gripping the edge of her seat. “Yes. I did.”

“How?”

“Like you said, in the book.”

The man removes his hand from Shona’s head. “Then you will ascend,” he says, “just as I did. You will return. Just as I did.”

Mark can feel nausea rising in his throat. Not because he can imagine what Shona has done to receive this benediction, but because her words force him to consider how he would answer. Has he also prepared? Gaps are everywhere. He worries he hasn’t prepared, but suspects he has. Both possibilities fill his heart with cold dread.

The author moves around to Jed and addresses him in the same way. “Did you prepare? Did you do what was necessary, Jed?”

“Yes.”

“Then you will ascend. Just as I did. You will return. Just as I did.”

And to John, wriggling in his seat. Mark half-expects him to lunge for the exit.

“And you?” the author asks.

Joyce answers for him. “He was too weak. He didn’t have the stomach for it. I had to do it for him.” She is breaking down again, sobbing into her hands, wailing as the full weight of her actions settles over her. But this time it is catching. Mark can feel his own breathing quickening, running out of control. He places a hand on his chest, a gesture of self-comfort so inadequate it sends him over the edge into a full panic attack. Something terrible has happened. He must have done something evil because of this man, because of his book.

“Why? Why did we do it?” Joyce asks.

“Because you had no choice,” the author says. “Neither did I. You surrender to the new truth or your mind snaps. It has happened to better people than you.” He removes his hand from John and places it on Joyce’s head.

Joyce’s face changes.

Mark has seen that look before. His mother, in the hospital when they gave her the too-strong drugs, the ones that skirted the line between pain relief and euthanasia. When they hit home, drawing the sting out of her cancer, he saw, for the first time ever, an expression of true serenity on his mother’s face. The author’s hand seems to take away all of Joyce’s guilt, all her doubt. He does not need to tell her she will ascend. She already knows.

After Olisè and Jed, the author finally comes to Mark. He stares up at this strange priest of new gods and wills his hand to rest on his forehead.

“And you, Mark. Have you been faithful?”

Mark thinks about the room at the top of his house where he left his family. But for the blood, they could have been sleeping. The strange thing is, with the author’s hand resting on him like this, the memory no longer seems so terrible; in fact, it may not be terrible at all. He knows that the book is only the start, that this man will lead them to strange new places, and they will be rewarded if they do his bidding.

Mark stands and embraces the author. He whispers in his ear as they hold one another, "I did as you asked." Mark is sobbing, tears of wonder and joy.

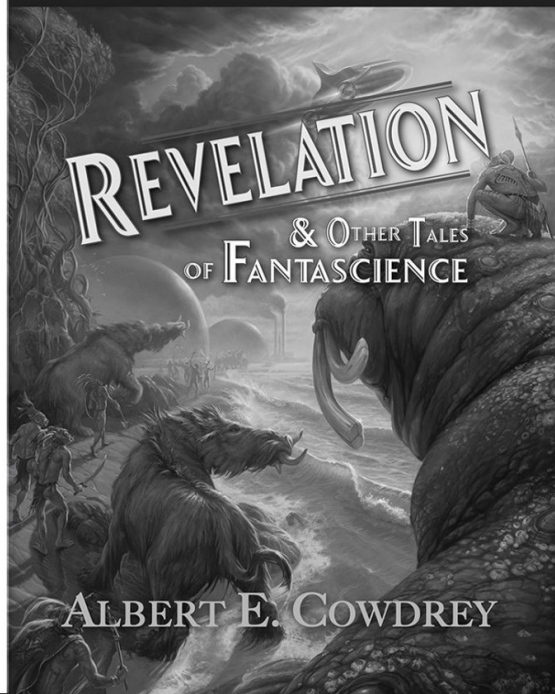
And the others approach, enveloping them, wrapping each other in their arms so they become a single mass of weeping, laughing togetherness. In the joining, the last of their guilt is expelled. Only new possibilities can be imagined now. They know the author and his book will show them the way.



**"Wonderful...
Cowdrey certainly
deserves greater
acclaim — and more
readers."**

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Award-winning tale of murder in the Crescent City.*



Originally from South Texas, Lisa M. Bradley now lives with her spouse and son in Iowa, the traditional homeland of the Iowa, Meskwaki, and Sauk Nations, among others. Her work has been featured on the LeVar Burton Reads podcast and in venues such as Lightspeed, Beneath Ceaseless Skies, and The Moment of Change: An Anthology of Feminist Speculative Poetry. Her short fiction and poetry collection is The

Haunted Girl. Her debut novel is Exile. Learn more at lisambradley.com or follow her on BlueSky (@cafenowhere.bsky.social). This poem is her first for F&SF and was written while she sat in the Denver airport.

Through the Keyhole

By Lisa M. Bradley

Changing back used to be the easiest part
of a process that was brutal
start to finish:

Close your eyes and let the blackness seep
back into the darkroom of your heart.

Let the animal retract into the cracked
jack in the box of your skeleton.

Let the marrow of broken bones
lubricate resistant skin sleeves.

The wolf is wily
and always leaves you somewhere
your screams go unheeded

Somewhere nestlike to your nude
and feverish awakening.

But solace was forfeit once you thought
to shape your shift-back

Once you realized
if you just held your head above
the stomach churn and eye-popping catechism
of abnormal anatomy

You could guide the realignment
of organ and bone, sinew and cartilage
nerve and flesh.

Once you knew you could seize the control
over your body

that you lacked on the full moon
and so many days and nights in between

Like the first change
when the monthly blood and
night lightning came upon you at once

and threw you to kiss the ground
so you bit your tongue
And you bled at both ends, gagging
knowing the taste of yourself
as predator and prey
girl and not
human and beast.
Now you drive your body, screaming
through the keyhole
And you don't look back to see the pelt
and pound of flesh left behind
You only lick clean the treasure of your new self
and ready to creep into the world, wary
wily as the wolf.

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Geoffrey Landis divides his time between science and science fiction, and sometimes has a hard time telling which is which. In his work for NASA, he's participated in designing missions to the methane oceans of Titan and power systems that can operate on a mission to dive into the sun. In science fiction, he's won the Hugo, Nebula, Locus, and Sturgeon awards. He's still sad about dinosaurs. It wasn't their fault!

No One Now Remembers—

By Geoffrey A. Landis

These are the things no one now remembers:

The scent emitted by tyrannosaurs in the rutting season, at once ethereal, like the scent from God's armpits when God had just finished making the world, and yet also earthy, stronger than a ripe *Pont l'Eveque*, a reek so powerful it would drive men mad with longing and lust, had there been men to smell it;

The feel of the delicate skin of a triceratops, just behind the frill, softer than calf's leather, softer than a lady's fingers, in that spot where they so love to be scratched;

That subtle color, not quite purple, and yet deeper than indigo, on the belly stripes of a velociraptor, so beautiful, so lithe, so deadly;

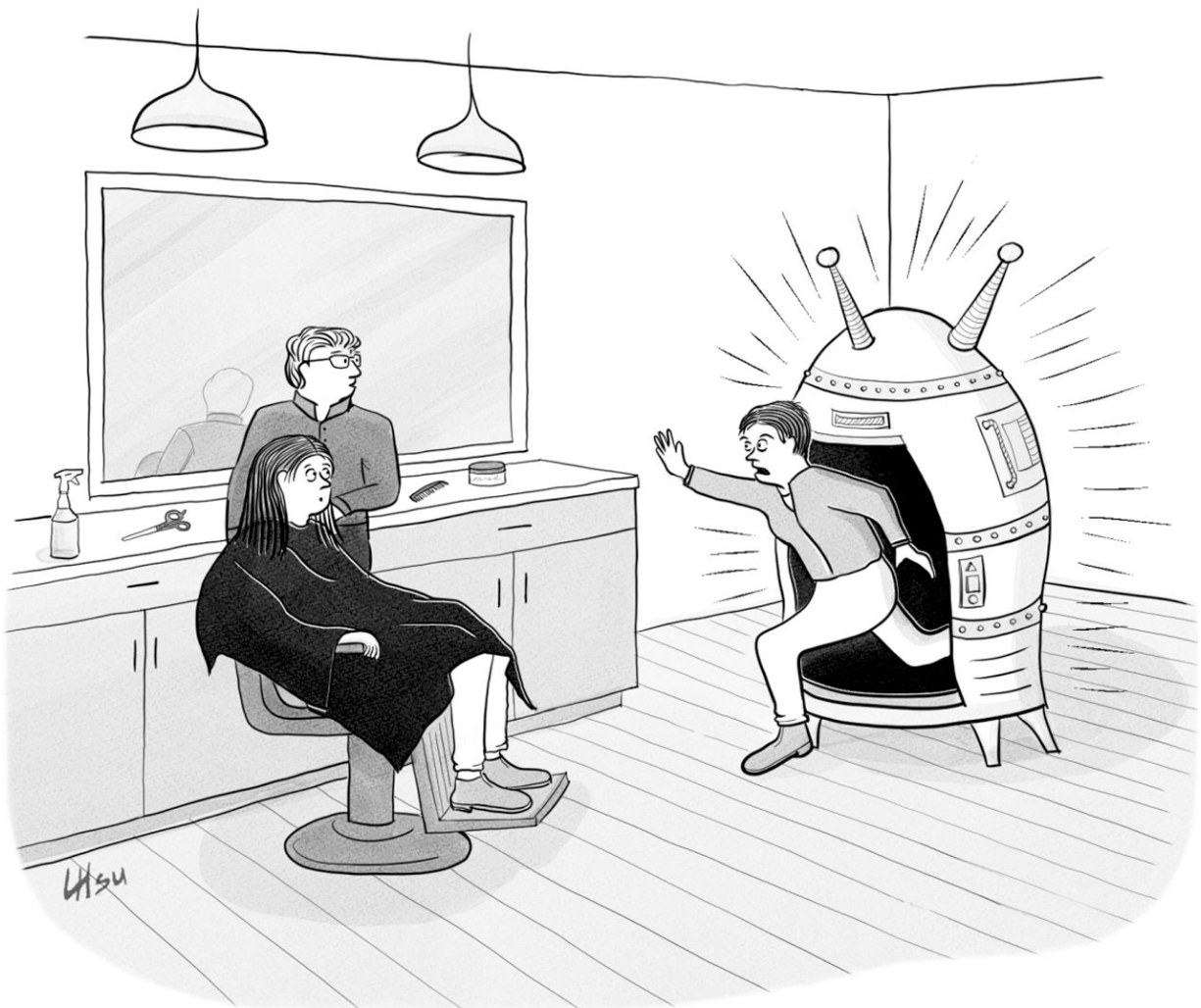
The songs that the parasaurolophus would sing, the intricate, flowing voices layered over ever-changing melodies, weaving in and then falling silent as one and then another takes up the tune, with choruses harmonizing in a minor fifth, singing as they gazed up at the gauzy apparition spread across the spring evening's pale pale sky,

on the final days of the last spring that there would ever be dinosaurs to sing.

This is what no one will ever remember:

The sound of the end of the world.

75



*“I’m you, two hours from now, here to warn you to
never try a pixie cut.”*


Titan

By Geoffrey A. Landis

Sky the color of mud,
thick with organic sludge:
here the stars never shine.
The ringed planet beyond the sky
never rises nor sets.

Cold, the nitrogen air
above hydrocarbon seas;
Hades with no Persephone.
Where water is just another word
for rock.

And yet, and yet
beneath the tideless seas
fed by methane rains
what slow cold thoughts
are thought by slow cold beings?

Swaddled in that dirty blanket,
submerged beneath the oily ocean
strange eyes take delight in their own ways
strange beasts eat beasts stranger still. 

Marissa Lingen lives in Minnesota in the middle of lots of family members and even more trees. Her short fiction has appeared in F&SF before, but this is her poetry debut in these pages. She was suddenly taken by the idea of Andersen's "The Little Mermaid" as someone separated from a lifelong sisterhood.

Like Other Girls

By Marissa Lingen

I miss my scales and my sisters—
But so does every girl I meet
On land. Uprooted from their farms
Where they grew in a school of cousins
Who could say one girl's name to her
When her own voice failed. Yes:
I am like the other girls
When the powers don't hear me.
Like them in our painful steps
Toward destinations we're not sure
We seek anymore. My soul
Is seafoam like theirs
Evaporating without a trace
No matter what lives we've saved
Or created, or enriched.
My sisters return with a knife
To press into my hand
To save my tale, and I know
Whatever ending I choose
I am in good company.

J.A. Pak has called many places home, among them: NYC, Oxfordshire, LA, SF, and—perhaps most fondly of all—the æther. “Portrait of a Dragon as a Young Man” is her prequel to “The Gentle Dragon Tells His Tale of Love,” published by F&SF in January/February 2022, describing the chance encounter between Faine, a noble and storied dragon, and Lark, a young woman. In “Portrait,” Faine recounts a time during his “childhood,” living among humans, eager to understand their perplexing ways. More of J.A.’s work can be found on her blog, “Triple Eight Palace of Dreams & Happiness.”

Portrait of a Dragon as a Young Man

By J.A. Pak

So. I promised you that I would one day tell you how I came to live among humans.

I was still a young child. Just past forty. My mother had chased me out of her lair, and I was seeking companions. At such a young age, it is good for a dragon to find a small group to live with. But a dragon must show their mettle before being invited into a group. I'd wandered here and there, fighting occasional battles, neither definitively winning nor definitively losing. But my reputation for bravery was growing. One day, while I was flying high above the ocean, a group of three decided to test me. Out of nowhere they came, all three attacking me at once. These were dragons much older and more experienced than I. One was over three hundred and would soon go into solitude. It was a compliment that they wished to test me. I'd either join them or die. I almost died. I'd never battled more than one dragon at a time. Three. Just too much. I was ripped open and falling, blue sky streaking away from me. I landed on trees, much to my surprise. I was sure a drowning awaited me. Preferable to a slow death on land.

What I did not know was that a human had seen my battle, witnessed my fall. My first love. Meena. She was always rescuing creatures, my Meena, mending their bodies, reviving their souls. She was a great healer. A mere touch of her hand, the sound of her voice—as nourishing as Cymbyny's nectar. On the back of her long-limbed bathir she came, knowing what medicines I would need as blood had come raining down the mountain side, soaking the island soil.

(Now extinct, bathirs. They were like dogs. The size of ponies. Indigenous to the island. Quick. Very quick. With a keen sense of smell. Difficult to train but loyal. I forget the name of Meena's bathir, though I see

his face so clearly. He adopted me as a younger brother. At times he thought me quite foolish, and I suppose I was.)

Meena patched my wounds and fed me large bunches of herbs that stopped the heavy bleeding. Whenever pain would make me groan, she'd sigh, babbling sympathetic words I could not understand. Part of her medicine was singing, songs that eased my suffering, lulled me into sleep. Under her care I healed quickly, but even after several days, I could not unfurl my wings, so weak was I from loss of fluids. You do not understand what it means, how vulnerable a dragon is with wings they cannot use. I was miserable, anxious. Meena seemed to understand.

"Pity you are not a boy. Then I could take you home and nurse you. I feel you would do better inside a warm house, with soup and porridge. I cannot feed a dragon properly. Not that I know what a dragon eats or does not eat. At least the herbs are helping you. I'm grateful for that. Poor thing. I don't even know if you are male or female. If only you were human."

Though I could not understand her words, I felt her longing and slowly began to transform. Before I knew it, I was a human creature. A young man.

"So that is how a dragon shapeshifts!" Meena exclaimed. "Extraordinary. To think I have lived to see it. Thank you."

She had her bathir lie down so I could climb on top of him. Walking by my side, she kept me steady as we carefully climbed down the mountain slope until we reached her home. There, with great tenderness, she bathed and fed me. I felt as if I was back in my mother's lair, though Meena was as unlike my mother as the moon is to the sun. She seemed so tiny, so fragile, my Meena—but only because she was the first human creature I had seen eye to eye. I knew of humans, of course. As part of my education, my mother had taken me to human villages and cities, keeping us high in the air so we were like dots to the humans below. "Beware of humans," she'd warned. "These creatures are full of ugly malice. Like hornets. Indecently greedy for power. Hungry to subjugate. Not just themselves, but every living thing. Dead too. They will dazzle you with their cleverness, with their temples that dare to touch the sky. Be wary. Never perform a kindness for a human. They have a law: no good deed goes unpunished." Delicious,

that, my mother's understanding of the proverb! But the core truths in her words have haunted me on many occasions.

It was not long before I could understand Meena. Dragons have a rare talent for languages, which is shapeshifting of another sort. We pick up languages just by listening. Soon, I was telling her my story and she, hers. She was a widow, my Meena. Her husband had been a sailor. Drowned at sea. "Humans are not good in the sea. But, my, how they love it," she'd say. She lived alone in a wooden house at the base of a mountain. Fresh spring water flowed directly into the house and there were hot springs nearby where we could bathe. She had a dragon's heart, for she loved solitude. Solitude from humans, I should say. For her home was lively with dogs, cats, birds, all sorts of creatures. And every hour some wild animal would come for a visit, often leaving gifts. She had her human visitors too, relatives, friends, strangers, some seeking company, some seeking advice. They always left with an ointment or a tonic, and a happy heart.

While I was still in bed mending, she kept me a secret.

"You need rest. You won't get any rest once the island knows about you. There would be a steady stream of curiosity seekers. And I hate curiosity seekers. The last thing I need is for the whole island to know I have a dragon in my house. Once you've healed and gone, I'll tell them. No. I won't tell them. They don't need to know a dragon was here. It'll be our secret," she told the animals. The animals agreed.

Luckily, I'd arrived in winter. There were few visitors once the heavy snows began to fall. Coddled in Meena's cozy home, my body grew stronger by the day, though I was still too weak to transform back into my dragon self. Even as a human, I found myself having to sit more often than not.

"You have all winter to restore your strength," Meena said. "You're welcome to rest here for as long as you need. You don't feel the cold at all, do you, Faine? Still. While a human, you should follow human custom. These were my husband's. Let's see how well they fit you."

Clothes. Strange. Suffocating. Uncomfortable. Unnecessary. I protested. Meena did not seem to hear a word I said, talking right over me. "As I suspected. You are much too tall. Though thin enough. Faine, my dear boy,

how about shrinking yourself to fit the clothes? Is that something you can do with all that lovely shapeshifting skill? A good fit is what you need. It'll be so much more comfortable then."

She could make me do anything with her charming voice and smile. Just her mere suggestion and my body was changing, the clothes becoming longer, looser, though I still did not like it.

"There. Perfect. You're now suitable for visitors. While you're at it, do you think you could change the color of your hair? And fingernails?"

"The color?"

"Quite spectacular the color. But too strange for a human. Wait. I'll get a mirror. Now look."

And I did. What a surprise. My human dress. I saw a frightening creature and not myself at all. Where was my tail? My wings? Could I breathe fire? "I am strange," I said.

"No, not at all. Not at all. You are a very handsome human. A very handsome young man indeed. The girls will go wild over you. It's just that—hm, it's just that—the thing is, Faine, humans do not have scarlet hair and nails, you see. It makes you stand out so. Perhaps you could change the color of your hair to something like mine? And soften it so it doesn't stick out so stiffly. And your nails. See how mine are almost transparent, so you can see the skin underneath?"

I did my best. My nails became light brownish-orange. But my hair was not transmutable. I would not learn the skills to change my hair for another three decades.

"Well, never mind," Meena said, smiling. "After all, who is to say that a human can *not* have scarlet hair?"

She was kind like that. Meena spent the winter teaching me all the human ways of grooming, cleaning, cooking, mending, chopping wood, singing, reading, tending to the animals. I could not say why I did not fly away or why she did not send me away when it was clear even before the new year that I was healthy enough to leave.

"Do you mean to stay much longer?" she asked when all the snow had melted and the first buds began to appear on the trees.

“I find myself comfortable in human dress.”

“Soon I will have visitors again. I will introduce you to them. Not as a dragon but as a man. It will be best if you keep your dragon self a secret. It will be best for now. But, Faine, they will not like that a strange man is living here with me. Especially when so many have wished to do just that. It will be best for me to introduce you as my new husband. That will end any arguments.”

I did not know what that meant, what a husband was. I did not ask because I wanted very much to stay by her side.

Meena told her family and friends that she’d found me deep in the woods, badly beaten, naked, with no possessions, not even memory.

“Abducted by spirits!” they cried, stomping on the floor with their boots to scare away any lurking spirits. “They spit you out after they’re done with you. Lucky to survive.”

“I had a cousin abducted by spirits,” one friend confessed. “Gone for four and a half moons. Returned, bruised all over, scars where he’d been whipped. Couldn’t remember anything either, except for a vague recollection that he’d been forced to make gigantic nails for a bridge between the clouds. Never fully recovered his senses.”

“Faine, poor Faine, how your family must mourn,” they cried. I was fed sympathy for months. Human creatures seem to delight in giving this kind of comfort.

But poor Meena, how they teased her: “Thank the gods you found him, Meena, my dear. And such a bonny lad.”

Laughter shook the house, Meena blushing.

“Why do they tease you?” I asked her after they had all gone.

“You see. You see. Faine, you look and act like a naive lad of nineteen or twenty. I am fifty-one. They think you are too young for me. That I have taken advantage of your youth.”

“But I am over forty years of age.”

“Is that young or old for a dragon?”

“Young. Dragons can live for thousands of years.”

“How awful. I’ve married an infant.” She laughed. “Well, it is not as if we have a true marriage. And when you have gone, they’ll have the smug satisfaction of thinking that they’d known all along such a marriage as this could not last.”

“What is a marriage?”

“A human custom. A man and woman marry. That is, they decide to become a new family. So, they build a house together and prepare to have children. Most humans marry, you see. I don’t suppose there’s anything like that for dragons?”

“We have mates and sometimes it is for life.”

“So, dragons do marry, in their own fashion. I have found that there is very little difference between humans and animals.”

“Dragons are not animals.”

“No. I suppose they’re not. What then are dragons?”

I had no answer. What are we but dragons?

Now, Meena had a young cousin who lived in town. Mischievous. He was called Elto, and he came every week, badgering me about going into town with him. “You can’t live like this, being cooped up all alone up here like you’re Meena’s love slave. It isn’t natural. Come to town. Meet my friends. Stay the night. The fun we’ll have! You have no idea how pretty the women in town are. You can’t tell me that Meena’s enough for you. We’ll have a wild time!”

Meena always put him off with “Faine is still too weak.” But she knew her excuses would not last. So, she decided I must learn to drink.

“Learn? I know how to drink!”

“Water. Tonics. Fruit juices. Not alcohol. And my cousin will ply you with a great deal of alcohol. Alcohol is a dangerous thing. You need to know what it will do to you. Everyone reacts differently. Some barely feel the drink. Others become monsters with a mere drop. For most, it is a skill to be learned.”

“Why drink such a thing?”

“Indeed. Though there is a certain pleasure to it. In moderation. And it is a way to bind people together. Offers them solace in tough times, merriment in good. What is a wedding without wine and beer? Even the dead like their drink, which is why we pour some on their graves each year. Now, Faine, Elto will begin the night with a drink and end the night with a drink. And there will be plenty in between.”

We began with weak beer. First, just a small mug with lunch and dinner. Then half a pitcher. Slowly we worked up to strong ciders and wines. “You must never drink on an empty stomach,” she told me again and again.

I found alcohol did not affect me much. Mostly, I felt as if I was flying, though my feet were on solid ground. Not a bad state. And it made me joyous.

“You’re a good drunk,” Meena said. “And that’s a relief.”

“What makes you so worried, Meena? You can see that I am well when drinking.”

“You have not been tried, Faine. You do not know what a whole night of drinking is like. You have never been truly drunk. Never drunk with boys like Elto who will encourage the worst in you. Of course I worry. For what will happen when you’re out-of-your-head drunk? Listen, Faine, the island has had a dragon visitor before. His name was Ephoram. An ancient dragon. In human dress, he’d come to town and drink the night away. Dancing, singing. Drunk out of his mind. Kept the whole town from sleeping. He could drink barrels at a time. And when he’d gone past his limit, he’d lose control and explode into a dragon. Once the pub exploded right along with him.”

“And you think I’ll explode into a dragon?”

“I would not like you to lose control. Reveal things that are best kept hidden. At least for now. Know your limit and do not go beyond it. Do not get drunker than you are now. Ephoram was quite loved until the pub exploded. People died and he was driven away.”

“Tell me about Ephoram. How did he come to live on the island?”

“It was long ago. When Elto’s grandfather was alive. The town had no fort then. The pirates took advantage and harassed the island mercilessly. Looting. Burning. Killing. Kidnapping people to sell as slaves. Elto’s grandfather was a great builder. He drew up the plans for our mighty fort and gathered the strongest men to build it. Up they went into the mountains to fell trees and quarry stones. Huge, old trees, which they would drag down the mountainside. Terrible slow work. And dangerous. One day, there was a frightening accident. The ropes holding the tree trunks broke, and the trees began tumbling toward the town. It was Ephoram who saved the day. From high up in the sky, the dragon saw what was happening and came swooping down. With his immense talons, he grabbed the heaviest stone he could carry and dropped it on the slope, diverting the trees. The town was saved. They feasted him in gratitude and so he stayed. At first he was a tremendous help, hauling trees from mountain to town. It was quite a sight they say, the magnificent dragon flying with the massive trees and stones in his great talons. When they were ready to build, he transformed into a human, chopping, chiseling, carving, the dragon-man’s strength phenomenal. The island adopted him as one of their own. He stayed for a number of years. The pirates did not dare come near. With him we did not need the fort. Then the pub exploded and that was that. He was quite devastated by what he had done. I would not want you to feel the same.”

“Dragons and men do not live easily together, it seems.”

“There will be a day when you too will have to leave. But I want it to be on your terms, and with contentment, not shame.”

She was like that, my Meena.

When she thought I was ready, she took me to town.

“I think it best that I go with you this first time. You are unfamiliar with the town, unfamiliar with Elto and his friends. He can be very sly. More trouble than he’s worth. His own mother will say as much. I will watch over you. Just this first time. We’ll stay the night with my sister-in-law, Rafa. She and I are great friends. Perhaps we’ll stay a couple of days. I haven’t been to town in over a year. I have many visits to return and a good deal of shopping to do.”

Meena's island was a jagged rock unfriendly to boats. It had one port, which was also its only town. Small and lively, a perfect introduction to human civilization for a young dragon. Word soon spread that Meena had brought her new bridegroom. People swarmed Rafa's house. Elto was among them. After dinner, he pulled me away so he could take me to his favorite pub.

The pub. That first time. Overwhelming. Suffocating. Humans, shoulder to shoulder, behind, in front, sideways, I bumping into them, they into me. The noise, the damp smells, warm and curdling. I wanted to run home, back to Meena, back to her animals. Where was Meena? I felt a hand on my back. Meena. My Meena. I could breathe again.

"This way, Faine," Elto screamed in my ear, pulling me to a back table. Large tankards of beer were waiting. Much stronger stuff followed. I stayed with beer and Elto did not seem to mind. He even disappeared for a while, reappearing an hour or so later with a group of rather large men. I could smell a kind of frenzy thickening. The frenzy of starving animals sensing injured prey. A table appeared in the middle of the room. Small clay cups were lined up, filled with resinous alcohol. Elto stood on a chair. "Drink-off!" he yelled. "Tadbo here, our current champ! And who should be the challenger?"

"Meena! Meena!" the room chanted.

"Tadbo against Meena! We'll take bets now!"

"Meena! Meena!"

Meena stood up. The room parted as she walked to the table. With one hand, she upended it, cups shattering against the floor.

"Elto. You shitbag. So, this was your plan all along. Faine was bait. Come, Faine. We must leave."

I'd never seen Meena angry before. She was magnificent. Her eyes like flint, her voice a razor. It was then that I realized Meena wielded great power. Men and women looked away, shamefaced. Even if you were in the right, she could make you feel such shame.

It was Rafa who explained everything to me.

“Our Meena is legendary for her ability to hold her drink,” she told me as we sat eating her magnolia honey cake. “She can drink anyone under the table. Men three times her weight. And she doesn’t get drunk like others, our Meena. The more she drinks, the more coolheaded she becomes. Mind razor sharp. No, she’s not like other people, our Meena. You’ll hear the rumors soon enough, dear Faine. That our Meena is not quite human. People like to say she is the daughter of a sea nymph. Half deity. Why, she can talk to animals and raise people from the dead. Just where did my brother find you, Meena?”

“Rafa is trying to spook you, Faine. Stop all this nonsense, Rafa. I was born on an island not too far from here, Faine. I met Rafa’s brother when he came to shore during a lightning storm. He was fishing on his boat.”

“And was your mother a sea nymph, Meena, my dear?” Rafa teased.

Sea nymph. Yes. There was something of the sea about her. For years, I could not say what, but now I see she had the same hypnotic rhythm, the cyan wash of light dancing upon water.

“You can ask as much as you like but the answer will be the same. I cannot say as I have never met my mother. Whether she died or left, my father would not say. So perhaps she was a sea nymph. Your guess is as good as mine.”

“Your father must have loved her very much. Or hated her very much,” Rafa retorted.

Love. Hate. What strange creatures humans are. It took me thousands of years to understand these odd emotions. “Understand.” Well, perhaps not the right word.

“Why would you not drink with the men tonight?” I asked.

“It is a silly game. A dangerous game. I’ve seen too many men and women come near death trying to defeat me. I swore publicly never to do it again. And certainly not so that Elto can make money taking bets. Disgraceful.”

“Truly,” Rafa agreed. “Elto has surprised me. I had heard rumors of his bad behavior, but this is truly disgraceful.”

Next morning, Elto came with gifts. He apologized and begged forgiveness. “In atonement I swear to protect Faine as a true blood kin. Test me. Let Faine come with me tonight. I will return him tomorrow morning. If he is harmed in any way, I will forfeit my life to you.”

“Faine. Will you trust yourself to Elto?”

“Yes, Meena. I will, if you think it wise.”

“Elto, if he is harmed in any way, I will sell you to the salt mines of Plith. Rafa, you are my witness.”

“I am your witness.”

So, it was done. Under Elto’s protection, I was now a member of the fellowship of man. Each month, for a week, I stayed in town with Elto and his friends. We’d drink all night, and, during the day, work together at the fort. To my surprise, Elto was much respected as a builder, having inherited the gift from his grandfather. I helped him with his work maintaining and repairing the fort. Invaluable skills I learned and then used. Why my lair was so comfortable. He also taught me how to shoot arrows, fight with swords. And having no fear of fire, I became expert at handling the machines that shot fireballs into the sea. The town no longer had Ephoram, but they had a fort built like a dragon. No pirate ship dared attack.

(Did I say that I met Ephoram a thousand years later? Ephoram. The best of companions, a dragon like no other, the mate of mighty Isslan, who, to honor his death, I would never again be mates with another. We bonded like twins and had many adventures together, epic and often hilarious. Like the time we dove into the hell pits of Surmudt, in human dress, no less, just to rile their gods and found—Well. Another story for another time.)

Elto. His mindless escapades could ensnare you for days. One midsummer, I did not come home for three weeks. Understanding as always, Meena said after our supper, “Perhaps you’d like to move into town. It is rather dull here for a young man like yourself. You have many friends now. And a growing flock of girls who worship you, I hear. It is to be expected. Expected that you would wish to spend more time with your new friends.”

“They frighten me. The girls. They follow me. And scream my name and I don’t know why. Why do they suddenly have scarlet hair?”

“Have they all dyed their hair scarlet?” She laughed. “What an odd thing to do. A strange way to show devotion, I must say. These island girls never cease to amaze me. Yes. Yes. You had best move into town. You are an object of worship and I would not want to deprive the girls.”

“This is home,” I said.

“It is almost winter,” she continued, as if I had not said a word. “You can stay in town all winter. Come back in spring. When the snow falls, you may be stuck here for two or three months at a time. You will miss your friends.”

“I will miss you more.”

“I see. I see.” She smiled. “It is a clear, moonless night. Shall we go out to look at the stars?”

The sky was a black sheen and the stars pulsed with life.

“Bring your lyre.” I loved to hear her play while we looked at the stars. Even now, I will hear her music, and it is my youth in starlight.

“The stars are beckoning,” Meena said, her lyre the night sky. “Come up and dance with us, they’re saying. Shall we fly up to greet them? I’d like to see the stars from high up in the sky.”

This was the first time she’d ever asked such a thing.

“I am afraid.” I hadn’t changed into my dragon self since falling out of the sky. “Someone might see us. I may be discovered.”

“Yes. Yes. It was a silly thing for me to ask. I wonder why, why I am feeling so foolish tonight.”

I was not truthful. I was afraid. Not of discovery. I was afraid of becoming my dragon self—of fighting another battle—of falling. I was afraid. And I was ashamed.

Spring came early that year. More like summer, with hot, humid days, unusually so. Flowers seemed to bloom overnight. I spent my days fishing at the lake. I never caught anything. Well. I never baited my hook. If I wanted fish, it was far easier for me to dive into the lake and use my hands. It was Elto who taught me to fish the human way, though I confess I could not understand it. Fishing seemed to be an excuse to do nothing. So, I did nothing. Sleeping on the grass, staring up at the sky, sometimes taking a

small bamboo raft out onto the water. There was a strange unease in my body. Late one afternoon I was dozing when I heard Meena's gentle laughter. "You're like a small child. Always throwing your clothes off as soon as I'm out of sight."

"It's much more comfortable to wear no clothes at all. To feel the breeze on one's skin. It is only the two of us here. Are you not hot and sweaty, Meena? Would you not feel more comfortable without clothes? Surely, you would."

"We are not truly married. It's best for us to remain modest. Here. Sit up. I brought you some berry juice. I thought you'd be thirsty. The jug's been in the spring since morning, so the juice is nice and cold. You've been out here a very long time. I'm glad you don't get sunburn."

I was grateful for the juice. "You've said this before. That we are not truly married. What does that mean?"

"Mean? Mean? It means—that is to say—it is hard to explain. A true marriage is when two people decide to share their lives with one another."

"And have we not done that?"

"I took you home because you were injured. We told people we were married because it kept their nasty noses out of our private business."

"I am no longer injured. I stay because I wish to. So, are we not truly married?"

"No. We are not."

"Were you truly married before?"

"Yes."

"And how was that different?"

"We were in love."

"What does that mean?"

"We loved each other in a way that made it impossible to part. I followed him here, to this island, because it was less painful for me to leave my home than to part from him."

"I do not wish to part from you. I must love you."

“You were injured and I healed you. You love me because I nursed you. It is to be expected. And it is not the same.”

“It has been a long time since I was injured. We are truly married.”

“Faine. How truly human are you?”

“You can see for yourself.”

“There’s more to being a human than physical appearance. What I mean is—do you feel sexual desire the way humans do? *Can* you feel sexual desire?”

“Is that what I’ve been feeling?”

“So, you haven’t had sex? With a human? With a dragon? Ah.”

“Is that what you mean by a true marriage?”

“It is different for everyone. But for most, yes. For me, yes.”

“Is it so hard? Sex?”

“It is a skill like any other. It takes practice. A good teacher is invaluable.”

“Shall I ask Elto to teach me?”

“What a horrific thought! No. Do not ask Elto. The island girls laugh and say sex with Elto is like having sex with a drunken wasp. Most young people are taught by the priests and priestesses. But they will not come until the next Festival of Dawn.”

“Is that how you were taught?”

“Yes. By a priestess. A priestess of Bpah’. My whole island was a temple of Bpah’. I was to be a priestess. I suppose that is why I can hold my liquor. Bpah’ taught us how to make a special drink, a spirit, to help us commune with her. I’ve drunk it since I was young. Had I met my husband one month later, we could not have married, for I would have been dedicated to Bpah’.”

“Could you not teach me, Meena?”

“The teachings of the body are a sacred rite. A holy ritual. It was such a long time ago, my first lesson. Would I be a good teacher? I’m not sure.

What was that first lesson? Ah. Yes. The art of touching. It is important, Faine. To know how to touch another person. To touch the body, to touch the mind. It is an honor. Each person is different. You have to learn to feel what the other is feeling. You must please as much as the other pleases you. Go slowly and patiently. Like this.” With a finger she caressed parts of my face, slowly, tenderly. She touched my lips, and I felt such a feeling! It was as if I was drunk with life. Overwhelmed, I held her tightly in my arms and I thought I would never let go.

True marriage. It is as Meena said. Too hard to describe, for it is more than anything you can point a finger at. And so very different, each time.

• • •

Many seasons came and went and I did not notice. It was another summer—we were gathering wild plants when the sudden relay of horns stiffened our backs. The island was being attacked.

“No, Meena, you must stay here. You are safer here,” I commanded as I prepared to ride into town. I’d been made a captain of the fort. A great pity I was not already in town.

“Don’t be silly. If we are attacked, there will be terrible injuries and they will need every healer on the island.” She packed her boxes of medicines and rode with me.

Pirates had attacked five years previously. We’d repelled them easily with our fireballs. I thought this battle would be the same. But our new attackers were not pirates. This was an army, a well-disciplined fleet of half a dozen large ships in the shape of dragons. No one knew who they were, what they wanted. Two days, they sat, anchored, silent, expertly sowing unease, fear. And then a message. Surrender immediately and you will be spared. Fight, and we will destroy you. Every man, woman and child will die. They called themselves the Empire of Fut-huhn.

We answered with fireballs, volley after volley. Three of their ships caught fire. But before we could celebrate there was a piercing shriek that tore at our hearts. In the sky, a great golden dragon, sparkling like the sun. So. Their leader was of my kind. He’d kept hidden in human dress. There

was no time to spare. With just a few of the dragon's breaths, the fort would be aflame, and then the town. They would keep their promise. Every man, woman and child. Massacred. Meena. It was instinct. I had to protect Meena, my friends. I was in the air, dragon fighting dragon.

He was an experienced fighter; I could see a great many battle scars on him. But my protective instincts had made my mind razor sharp, and I was far quicker. I whipped his neck with my tail and ripped his belly with my teeth. I shredded his left wing. Stunned, he retreated, shrinking to human form as he fell back onto his ship. While I had fought in the sky, my friends had fought from land, sending a tremendous volley of fire into the sea. Four of their ships were now in flames, disintegrating into the sea. The remaining two sailed quickly away.

I should have returned to the fort, but I did not. To be my dragon self again, spiraling through the sky. Exhilaration. Weeks went by, and then the milky skin of home and Meena tightened around me. I found the island again, landed. In human form, naked, I walked to our house. Meena was alone, repairing window shutters. "You have returned," she said simply.

"Yes. Did you think I would not?" I felt a little hurt.

"I thought once you had tasted sky and wind again, you would forget the human world. Surely you have missed your dragon home."

"I have no other home. Meena is my home. I will never leave you."

And I never did. It was she who left me. In her three hundredth year, Bpah' called to her. She returned to her temple island and became a priestess. This was at that time when humans had far fewer children but lived much longer, sometimes into their five hundredth year. I did not mind that Meena was called to Bpah', for I had developed an insatiable desire to explore the world of humans. So, I sailed east and found adventure after adventure. Every ten years or so I went to see Meena, for our hearts were forever bound. No matter where I was, if I was injured, she felt my pain, and though I was thousands of miles away, I knew the instant she took her last breath. I think she did indeed have a trace of sea nymph, for she lived into her eight hundredth year.

• • •

My life with humans ended with a sudden halt.

I was living in the city of Kistur, quietly as a merchant. There is much to love in anonymity. Kistur was magnificent then, a powerful center of trade, grand buildings crafted from cedar and stone, copper and lapis lazuli blazing its city gates. The rooftop of its mountainous beehive temple was dusted with gypsum, as were its municipal buildings. In the sun, the gypsum sparkled and Kistur was a dazzling diamond set in the diadem of a god. The god Nin, they of a thousand crystal wings. It was Nin who ruled the city.

I often went to the buzzing markets to amuse myself. Nin had decreed that all creatures must be welcomed within their city walls. So they came, from far and wide, twisting and turning Kistur's expansive granite streets with a torrent of languages, costumes, smells, stall after stall catering to every taste. One morning, the sun locked in brume, I saw the most remarkable woman. Eyes like frosty green jade. Hair, a field of flax in bloom. I felt a deep connection—penetrating, disturbing. In a flash she was gone—the market was swelling with waves of people carrying all manner of stuffs, including live animals. I did not think I would see her again, but there she was the next morning, and the next, flashes of jade, flax, and then nothing.

I had to know who she was, and yet I was afraid, something fighting inside of me. I would follow her, I decided, find out where she lived, her name, her people.

As soon as the sun rose, I was at the market, searching, searching, day after day. She was nowhere to be seen. In a fever, I was losing hope, when suddenly, she was there. In the main square, walking briskly. She glided along several streets. She continued through the city gate, walking, walking, into the woods, her steps now very quick. In a secluded meadow, she began taking off her clothes, neatly folding each item of clothing into a large shawl. She hid the shawl in a tree she'd clearly used before. And then she ran, her face beaming with joy, until she was flying, high up into the sky, the most terrifying dragon I had ever seen.

I did not wait to take off my clothes. I flew after her, determined never to lose sight of her again. My courtship of Isth had begun. And it was glorious!

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Mary Soon Lee was born and raised in London, but has lived in Pittsburgh for thirty years. This is her twenty-first appearance in F&SF, and she says, "I've loved dragons back since I first met Smaug and Orm Embar, and it's a great delight to create my own ones." Dragons also appear in her book, "The Sign of the Dragon," an epic fantasy with Chinese elements, winner of the Elgin Award. She hides her online presence with a cryptically named website and Twitter account: marysoonlee.com and @MarySoonLee.

Once upon a time, Mary Soon Lee earned degrees in mathematics, computer science, and astronautics and space engineering. Yet now she writes about dragons. Her work often springs from the intersection of multiple ideas, in this case phoenixes and dragons. Her latest book, "How to Navigate Our Universe," straddles astronomy and how-to poetry, offering up such essential advice as "How to Survive a Black Hole."

Orchid Dragon

By Mary Soon Lee

To strangers, we deny dragons
dipping our heads respectfully
claiming we are simple villagers—
ignorant, illiterate, impoverished—
dipping our heads we insist
that even villagers
know that dragons
are fables.

It is safest
to be underestimated.

Now that you have married my grandson
now that you have lived among us
for three full moons
it is time to introduce you
to our dragon.


Stop quaking! Calm yourself!
If I had wished you ill
you would not have lasted
past the first full moon.
Our dragon asks nothing
but orchids.

Yes, yes, orchids, the flowers—
the spring gentlemen—
she collects them

that is why my grandson
visited your town
seeking rare orchids
finding you instead.

Gather your wits
fetch paper and brush—
yes, yes, we only claim
to be illiterate.
Possessing more patience than I do
the dragon will teach you
to write.

She will also teach you
in interminable detail
the particulars of orchids—
the aspects and proportions
of each type and subtype
their proper care and watering
their fragrances, range, growth—
listen well, yes
never let your thoughts stray.

A friend
no matter how irregular
deserves attention. 

Phoenix Dragon

By Mary Soon Lee

Here he comes, my death
on his armored warhorse

arrayed with arrows, axe
his arrogant presumption

as if prophecies protected
as if auguries were clear—

dragonlayer she named him
so he rides, so he rides—

denying, defying his doubt
but I know the heart of him

the times he ate less
so he could share more

the long road that led
from village to valor—

dragonlayer she named him
so he rides, so he rides—

but I name him sparrow-saver
gruff giver of blankets


knowing the heart of him
I will beg him to yield

as if I could mend things
as if auguries could bend—

dragonslayer she named him
so he rides, so he rides—

his road ends in death
to slay and be slain

mortal, he'll lie there
while I rise from the ash

knowing the heart of him
scant joy in that rising. 



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Rachael K. Jones is a critically-acclaimed speculative fiction author in Portland, Oregon. Her stories have appeared worldwide in magazines such as Lightspeed, Beneath Ceaseless Skies, and Strange Horizons. This is her first appearance in F&SF. This story is part of a series of pieces exploring human relationships with fantastic creatures, along with “Five Functions of Your Bionosaur” in Robot Dinosaur Stories and “Six Fictions about Unicorns” in Uncanny Magazine.

Twelve Aspects of the Dragon

By Rachael K. Jones

1. The dragon is warm to the touch, not hot as you dreaded, like a kettle left to cool half an hour on the stove. You want to run your fingers from snout to tail, but it won't hold still long enough to let you finish the journey.

2. Smoke and fire, yes. Charred, wet meat. But also perfume, cloves and oranges, and a whiff of animal musk. More than gold holds value, and dragons hoard many beautiful things.

3. What is a dragon but a living bellows? Wings for pumps, clattering claws on sifting gems, and above it all, its throaty chuckle as it poses you a riddle.

4. The dragon always seems to be eating. As it slides a haunch between its jaws, you watch with admiration as the little bits of meat and gold come slithering out between the large teeth.

5. Fire glows red and yellow and orange and blue, and though your eyes are smarting, you reach out and grab the nearest pillar to keep yourself from plunging into it.

6. The dragon will catch your eye, see into you, and know you have some need to be filled. Dragons make no distinction between want and need, collector and thief. You have come to rob its hoard. The dragon knows this.

7. The dragon's rustling scales are seductively soft to the touch, but it is scratchy along its back and belly, as if it is loath to wear the gown of its scaly skin.

8. This dragon isn't like the ones who burn villages or breathe fire. It doesn't suck life out of you, or leave welts on your skin. You breathe in the scent of the dragon, and for a moment, it doesn't smell like smoke anymore. You wonder if this is how it is with all great loves.

9. There is a strange distinction between its body and claws, between hide and teeth. You would draw lines between them, and be careful not to cross them.

10. When you look into the dragon's eye, you see your own reflection, as in a mirror. You do not see the dragon itself.

11. There will come a day when you will perceive the dragon-shaped shadow as the center of gravity. You will stretch out your hands and plummet headlong into it. You will join its hoard. You will let yourself be collected.

12. The question is not whether you are free to leave, but whether you are willing.



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BOOKS TO LOOK FOR

Charles de Lint

The Road to Roswell by Connie Willis, Del Rey, 2023, \$28, hc.

The thing about these times we live in is that the sheer volume of ugliness and division, pandemics, war, and weather disasters really seems overwhelming. Lighter entertainment can sometimes feel like a necessity, just to keep our equilibrium.

Of course, that kind of a story has its detractors.

They'll mutter about escapism as though it's a bad thing. There's nothing wrong with escaping for an hour or two. It doesn't mean you're withdrawing from reality. It just means you're taking a little break to get the energy you need to face the weight of the world again.

Or they might talk about guilty pleasures with a slightly disdainful tone. I hate that term, actually. If something gives you pleasure, and it doesn't hurt anybody, you have nothing to feel guilty about.

Everything we read doesn't have to be weighty and socially conscious and have deep meanings. It can also just be fun. Given my past few years, I can use a little fun.

And that's something that Connie Willis's *The Road to Roswell* delivers from the first page to last.

Francie has arrived in Roswell, New Mexico, to be the maid of honor at her college roommate Serena's UFO-themed wedding, which has unfortunately (in Francie's estimation) been timed to take place during a UFO festival. From baggage claim to the lineup at the car rental, Francie's subjected to earnest advice, warnings, anecdotes and the like about aliens and UFOs, to which she can only roll her eyes.

Serena's bridegroom is a true believer, which is the main reason Francie is here. It always seems up to her to be the voice of reason, because Serena certainly can't be left on her own when it comes to men. She's dated a BASE jumper, a gun-toting survivalist, and a breatharian (who believed we can survive solely on air and positive thinking), and she's been engaged to a soul shaman and a storm chaser.

The wedding is being held in the UFO museum. The dress Serena got for her is neon green, and she insists Francie go into the washroom to try it on. Rumor of a new UFO sighting/crash empties the museum—even of the bridegroom—and Serena realizes she's forgotten her twinkle lights in her car. Francie offers to go get them, gets to the car and—

Is abducted by an alien. Not one like in the posters in the museum. This one looks like a tumbleweed and a mass of lightning-fast tentacles. And the next thing Francie knows she's being forced to drive the alien out of town to go god knows where.

Part of the flap copy reads: "Part alien-abduction adventure, part road trip saga, part romantic comedy, *The Road to Roswell* is packed full of *Men in Black*, Elvis impersonators, tourist traps, rattlesnakes, chemtrails, and Close Encounters of the Third, Fourth, and Fifth kind. Can Francie, stuck in a neon green bridesmaid's dress, save the world—and still make it back for the wedding?"

There's all of that and so much more. And so much to love. The cast of characters keeps growing as the alien abducts more people along the way and they try to figure out what the creature wants and why it's so frightened of Monument Valley. The dialogue crackles, there's drama and humor, and I haven't had so much fun with a book in ages.

It's the sort of story that when you get to the end you just wish there was more because you don't want to leave these characters when you get to that last page.

Highly recommended.

• • •

Challenge of the Court by Heather G. Harris, Heather G. Harris, 2023, \$17.99, tpb.

Betrayal of the Court by Heather G. Harris, Heather G. Harris, 2023, \$17.99. tpb.

Revival of the Court by Heather G. Harris, Heather G. Harris, 2023, \$14.99. tpb.

Now, while the Connie Willis book is something that I think everyone, regardless of their normal reading preferences, would enjoy, this most recent trilogy by Heather G. Harris is more geared to the Urban Fantasy reader. But it's just as much fun.

It's set in Harris's Other Realm world, in a UK much like ours but where magic works. There's the Common and the Other, but they both occupy the exact same space, the difference being that in the Other, magic is stronger and beings tend to wear their natural form, but Common and Other interact with each other. If you're in the Common, you can always tell if someone is Other, because even if they look human, they will have a small triangle on their brow.

We were first introduced to Harris's world in an earlier trio of books starting with *Glimmer of the Other*, where we met Jessica "Jinx" Sharp. She's a small-time private investigator dealing with things like infidelity and tracking items down for her clients. Jinx is an empath, but she's also a human lie detector, but it only works so far: If a person believes they're telling the truth, it doesn't come back as a lie to Jinx. Still, it's a useful ability for a PI.

Harris seems to write her books in groups of three. In the first set of Jinx books, we got introduced to her world and to Jinx herself, of course, and followed her growing romance with Emory Elite. He's the Prime of the dragons in Other as well as Prime to the other races that don't wish to pledge their loyalty to the Connection, a kind of ruling party that polices interactions between Others and Commons. Jinx worked on various cases while the thread running through the three books was the growth of her relationship with Emory

Harris stepped away then to do three books called *Other Wolf*, about Jinx's best friend Lucy, who ended up becoming the alpha of a local pack.

Now Harris is back with Jinx. In this trio of books, Jinx is once again solving various cases while the thread running through is her upcoming marriage to Emory, which is constantly running into snags (like Jinx being imprisoned by the Connection, or running afoul of a certain segment of the dragons who don't think she's worthy of marrying their Prime).

The tone throughout is light, adventurous, dramatic in places, but mostly just very entertaining. And where I find myself losing track of who's who in a lot of Urban Fantasies (confusing the lead of one series with that of another), I never have that issue with Jinx and her friends.

You can read these three on their own, but I highly recommend you start with the first three. The books are short and snappy. They won't take a lot of time and you won't regret it.

And for those of you who have been following along with the Other Realm series, you'll be happy to know that the next three will feature the witch Amber and the assassin griffin Bastian whom we already met in various Other Realm stories.

Harris is building a great world of interlocking stories and characters, and I for one am happy to be along for the ride.

Highly recommended.

• • •

Oak and Ink by Devon Monk, Odd House Press, 2023, \$10.99, tpb.

Devon Monk is the author of the Ordinary Magic series. It takes its name from the town of Ordinary, a place where the gods put down their powers to vacation and monsters live peacefully, everything policed by the indomitable Reed sisters. If you haven't tried it, you really should.

Her Souls of the Road series is set outside of Ordinary but it's the same world, focusing on Lula and Brogan Gauge, lovers bound to endlessly travel Route 66. Brogan is a spirit, trapped in the Earthly realm, while Lula

is neither human nor monster and only half-alive. I've only read the first of the three books in this series so far, but it's also terrific.

Which brings us to *Oak and Ink*, a story set kind of sideways from the Souls of the Road series. The protagonist here is Ricky Vargas, six-foot-two with magic tattooed on every bit of her skin. She's what's known as a Crossroads and she's someone who, along with Valentine, the ghost of a werewolf, and a sentient house, provides sanctuary for supernatural beings who are being hunted, helps negotiate the peace between monsters, and is utterly formidable.

I get the sense that they were all introduced in one of the later Souls of the Road books, but I had no trouble getting up to speed, and the story makes an excellent taster for her work.

Oak and Ink opens with the arrival of a half-dryad wizard named Cardamom Oak who's on the run from a goddess from whom he stole three coins. They want them back or else. Trouble is he can't give them back because he's already traded them away. And now with his tree and his sister at risk of being destroyed, he's come to Ricky for help.

The problem is, she and Card have history. He walked out on her and broke her heart, and now that she's finally got over him, he has the gall to show up with a goddess on his trail, asking for sanctuary. Ricky wants to turn him down, but she can't quite do it even if—as the cover blurb says—it “means dealing with a swamp siren, her jerk of a father, and an enemy strong enough to tear her world apart.”

I love the supernatural world that Monk has created with these various series, combining her own creations with familiar figures from myth and folklore (most with an extra twist of her own). There's humor and drama, a little sprinkling of romance, and always a Sense of Wonder.

As I mentioned above, *Oak and Ink* makes an excellent introduction to it all. If you love it, you'll love the others. And let me assure there's much to be loved in these pages.

• • •

The Sinister Booksellers of Bath by Garth Nix, Katherine Tegen Books, 2023, \$19.99, hc.

When reviewing a book that's part of a series, I'm always a little conflicted about how accurate I am when I say that it can or can't be read on its own (except for the first book in the series, of course). In this case, *The Sinister Booksellers of Bath* follows hard on the heels of the previous title, *The Left-Handed Booksellers of London*, but I still feel it can be read on its own.

However, the first book's so good, why wouldn't you want to read them both? And as always with a good series, while the author does an excellent job here of catching the reader up to speed, there's so much pleasure to be gained from the intricacies of the characters' relationships as they carry on from the earlier book.

The Old World of 1983 England Nix has created has a very fresh feel for all that its roots lie in urban fantasy and British folklore. Here's some cover copy describing the first of the booksellers we meet in *The Left-Handed Booksellers of London*: "Merlin is a young left-handed bookseller (one of the fighting ones), who with the right-handed booksellers (the intellectual ones), are an extended family of magical beings who police the mythic and legendary Old World when it intrudes on the modern world, in addition to running several bookshops."

In that book, he meets Susan Arkshaw, on a quest to find out who her father is. She knows nothing about the Old World, but the Old World knows about her, and the booksellers are soon tasked with protecting her. By the end of the book, she has met her father and realizes that she's a kind of demi-god. But all she wants to do is live an ordinary life and continue her artistic studies.

Which she is doing when *The Sinister Booksellers of Bath* opens. But then Merlin, now her boyfriend, gets trapped inside a world inside a map, and the booksellers come to her to help get him out. And that brings her to the attention of an old power that realizes it can use her as fuel in its own nefarious schemes.

What I said I enjoyed about the first book holds true for this one as well when I wrote: "But what I liked best was the way Nix blends the Old World

folklore into the everyday. This idea of the booksellers dealing with the otherworldly just tickles my fantasy-loving heart. Certainly, we've seen hidden protective societies before (a lot, actually, in urban fantasy) but the booksellers have a wonderful British eccentricity about them that sets them apart. And while Nix delivers a *Sense of Wonder*, he also shows just how dangerous the denizens of faerie can be.

"But he doesn't focus only on the dark and ominous. I particularly enjoyed the lighter touches, most of which centered around some aspect of the booksellers, from Merlin's penchant for dresses to the cabs that some of the booksellers drive to free them from the need to hire the same or use public transport, the good-natured bickering between the left-handed and right-handed, and so much more."

The Sinister Booksellers of Bath puts Susan smack dab back in the middle of the Old World, and she begins to realize that as much as she wants an ordinary life, the only way she can acquire it is to first deal with all of the unwanted ties that are pulling her into the Old World, some of which, she begins to see, attract her more than she'd like.

The book comes to a very satisfying end, as did the first, but there are a couple of elements left dangling that make me think there might be a third book still to come. Which is good news for all of us who have fallen in love with this delightful alternate UK and the engaging characters that people it.

Highly recommended.

...

imPerfect Magic by C. N. Rowan, Main Rock Publishing, 2023, \$11.99, tpb.

We're always saying we want something different. Well, this is something different, though if you want a touchstone, Richard Kadrey's Sandman Slim series might fit the bill. They certainly both share a dark sardonic tone and a penchant for strong language and graphic violence, and both play with the mythos of angels and demons, although Rowan focuses a lot on the Kabbalah, whereas Kadrey is all over the place and pushes against accepted lore with gleeful abandon.

But for all those similarities, they're quite different beasts.

Rowan's Paul is an eight-hundred-year-old heretical priest, once a part of the twelfth-century Cathar Sect. He also can't die. No, that's not quite true. He can die, but is immediately resurrected in the nearest dead body, which then takes on his usual physical attributes. This can be quite disconcerting for morgue attendants if they happen to be working close to a place where Paul dies.

The book opens with Paul being held captive and tortured by a two-bit magician who doesn't appear to have the power to have captured Paul and then also to be able to hold him captive. What's disturbing is that he's using Enochian (angel) containment runes, painted on the walls of the dingy cellar where Paul is trapped, and there's no way he should be able to use them without making his own head explode.

To get out of his predicament, Paul waits until the mage comes close enough to cut some more runes into his body and impales himself on the knife whereupon he wakes up in a nearby morgue. And now he's stuck with the task of figuring out who the mage is, how he's learned to wield impossible angel runes, and more importantly, who's behind this and what they want, because there's no way this pathetic magician is doing this on his own.

So, with his companions, Aicha, a force-of-nature kind of a woman warrior, and an ancient magician named Isaac (who created the Kabbalah), both of them also immortal, he embarks on a pursuit of whoever is behind this. Because the power of the Enochian runes is not only a danger to the south of France which Paul considers his territory, but to the whole of reality itself.

What follows is a pell-mell rollercoaster of graphic action, snark and dark humor which will keep you entertained for the whole of the journey, if you enjoy that sort of thing.

Rowan has done what a lot of indie writers do these days which is to write and line up a number of books which can then be released in quick succession, each building on the momentum of the others. As I write this, three more volumes have appeared, with, I believe, another two on the way (and probably out by the time you read this). It makes the waiting time

between books so much easier as readers eagerly wait for the next installment.

• • •

Futures Past: 1928 Space Opera by Jim Emerson, The Write Answer, LLC, 2023, \$29.95, tpb.

As I mentioned in my review of the first two books in this series, I've long had a fascination with the roots of our genre, the origins of those early explorers who created the seminal stories, magazines, and books in a time long before the present day, when aspects of sf and fantasy permeate almost every aspect of our culture. In fact, to a reader in those early days, we're living in a science fiction world right now.

Just look at the advances in science, computers, cell phones, AI.

And I wonder how much interest current readers even have in the history of the field. Does a generation that has distilled film to thirty-second clips on TikTok and appears to only have interest in the hot current trends care about what went before, the roots of the stories they're consuming? Does it matter to them that without the early practitioners of the genre, the field wouldn't even exist? And when they're the sort of person who drops TLDR (too long, didn't read) into the commenters' section of a lengthy post, will they have the will power and attention span to read a lengthy history of the field in book such as this, especially when it only covers one year, and that year's basically set in prehistoric times?

I have no idea.

I know the project fascinates me.

I'm also aware that with a promised length of fifty volumes covering 1926 through to 1975), published at the rate of a couple of books a year, I'm not going to be around long enough to read them all. I'm not sure the author will have the time to write them all.

But we take what we can get.

Most of *Futures Past: 1928 Space Opera* is focused on the year 1928. Like the previous volumes, it's a history book, chock-full of data, anecdotes, reminiscences, timelines, and hard facts about a year in sf.

It's also a bibliography, as it lists every story in every magazine published that year. Every book, complete with cover and a short synopsis. Every film, complete with synopsis, credits, posters, and stills. Add to that vintage covers, posters, candid shots, and more formal photographs scattered throughout.

Each of the volumes so far has had a theme. This time out it's Space Opera, and it's here that Emerson breaks away from focusing solely on 1928 with a detailed history of the subgenre, including long profiles of its pioneers: E. E. "Doc" Smith, Jack Williamson, and Edmond Hamilton. That material ranges from 1802 to 1998. Still, the bulk of the book focuses on the year in question.

What makes it all so engrossing is how the material becomes interactive. You can't help taking some bit of information and going down an internet rabbit hole to find out more. And your list of stories and books and films to track down will soon grow unwieldy. But that's not a negative.

And good though these volumes have been so far, I'm really looking forward to the ones dealing with the thirties, where I hope he'll explore the rise of fandom and its impact on the field. So many of our giants got their start writing letters to the pulps and contributing to the zines of the day. Part of the joy of the early decades of science fiction was in the various communities that sprang out of it. Many of which still exist today, so perhaps that will be what will draw current readers to pay attention to a book such as this, long though it might be.

As I said in my review of the first two volumes: one has to be obsessive to undertake such a task, but what a wonderful and ambitious project it is, and one that deserves our support.

The books are also available in paperback and PDF formats from the publisher's website, *sfhistory.net*, where you can download a free PDF of the first volume.

This is an astonishing reference work, and I'm in awe, not only of the effort that went into, but how successful it is so far. I've had copies of these

first two volumes for a while now and I keep going back to them, sometimes to reread entries, sometimes to make note of books and stories and films I need to track down. And I find I'm doing the same with this latest installment.

If you have any interest whatsoever in the history of the sf field, I can't recommend this enough.

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Material to be considered for review in this column should be sent to Charles de Lint, P.O. Box 9480, Ottawa, Ontario, Canada K1G 3V2. eBooks (epub or Mobi format only, please) may be sent as attachments to cdelint@gmail.com.

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BOOKS

Elizabeth Hand

Our Share of Night, by Mariana Enriquez, Penguin Random House, 2023, \$18.99.

White Cat, Black Dog, by Kelly Link, Random House, 2023, \$27.

The Perils of Reading in Bed

Some of my most memorable and often unsettling experiences come from reading very long books while recovering from an illness. *White Fang* when I had chicken pox as an eight-year-old (along with *Tales of a Chinese Grandmother* and Mary Lasswell's *Suds in Your Eye*, illustrated by the great George Price; when I asked my mother what this last was about, she said "Three old ladies who drink beer," which remains an accurate description). Much later, *Wuthering Heights* (severe bronchitis), *Moby Dick* (viral flu), *Lonesome Dove* (same), and, most recently, Marina Enriquez's *Our Share of Night* (21st century disease), a novel that's sublime in the original sense of the word, evoking beauty and terror in equal measure. The novel spans decades, from 1960 until the late 1990s, with some of its most arresting and disturbing sections set against the backdrop of Argentina's Dirty War, which unloosed real-life terrors as horrific as those enacted by members of the Cult of the Shadow, (or the Order), a global cabal of fabulously wealthy families at the center of Enriquez's sprawling epic.

Our Share of Night has a huge cast, many of whom play major roles. But it's centered on Juan, a medium whose heightened powers are crucial to the continuing success of the Order; his lover Rosario; and their son Gaspar. As the novel opens, Gaspar has begun showing signs that he's inherited his father's gift: like Juan, he can see and converse with the dead, many of

whom have died from torture or ritual sacrifice, inflicted by members of the Order or operatives in the Dirty War. In Enriquez's world, both are culpable of unspeakable horrors. She doesn't avert her gaze but deliberately bears witness to these, repeatedly, in scenes of torture, torment, murder, and sexual violence.

None of these scenes are gratuitous, which doesn't make them easier to read. But that's Enriquez's point: absolute power, whether occult or political, doesn't just corrupt. It destroys, purposefully and relentlessly.

Juan, a beautiful, pansexual androgyne, was born with a serious heart defect that needs constant medication and monitoring for him to survive. Without Juan and his ability to channel the supernatural power known as the Darkness, the Order can't perform the ritual that sustains their power and wealth. They've long fixed their hopes on Gaspar as a successor (the fate of his mother, Rosario, a member of one of the Order's founding families, remains unexplained till later in the novel).

But Juan knows that mediums, kidnapped or coerced into their roles, can be reduced to little more than slaves, their bodies and minds used to channel the Darkness, to be disposed of when they're no longer useful. Friends and family members are used as hostages to ensure the mediums' cooperation, yet even this isn't necessarily enough to protect them. Mediums can be driven mad by the Ceremonial, or die during the ritual or its aftermath. Juan, who's long acted as a successful channel for the Darkness, is unable to escape its power, even in death. Obsessed with ensuring that Gaspar isn't subjected to the same lifelong horrors and servitude, he does everything he can to hide his son's nascent abilities from the Order.

"The Darkness is demented," Juan confides to an old friend and lover, "it's a savage god, a mad god.... I'm a slave. I am the mouth. The Darkness can find me, it's a lost battle.... I am the open door and it cannot close, but I have to protect Gaspar."

Some of the most disturbing scenes in *Our Share of Night* depict the abusive behavior Juan inflicts upon his son in order to keep him safe, and early on, Juan sends him to live with others to keep him from the Order.

Our Share of Night unfolds in long sections, not all in chronological order, featuring various points of view and settings. This can be confusing,

but Enriquez's narrative gifts are strong enough that I trusted I'd eventually figure it all out. A family tree would have been helpful: many, many characters are related to each other, and the time jumps over the centuries sometimes had me going back to earlier chapters to recall who belonged to which founding family. I loved the section, nearly a hundred pages long, that's set in Buenos Aires in the mid-1980s. It fuses Stephen King's gift for depicting young adolescents with a reporter's eye for the Dirty War's atrocities and the legacy of Argentina's disappeared. Another section, set in London in the 1960s and '70s, is less successful—the drug-fueled excess, cameos by folks like David Bowie, and glimpses of the Biba department store, feel more like a pastiche of Nicholas Roeg's 1970 film *Performance* (though this section is where the reader finally gets an origin story for Enriquez's Order).

Compelling and compulsively readable, the ending of *Our Share of Night* doesn't quite knit together its myriad elements and narrative arcs. The novel is perhaps best enjoyed as a long, profound, undeniably dark acid trip, one whose bleakness is relieved by passages of extraordinary beauty and the company of characters as memorable as any in twenty-first century fiction. The Order's marriage of occultism with late capitalism can seem less outlandish than a morning or late-night scroll through the news and social media. Ultimately, the novel's most powerful and horrific chapter deals not with the Darkness channeled by the Cult of the Shadow, but that of the Dirty War's mass graves, where hundreds of Guarani children, among many others, were interred by the Argentinian military during one of their routine genocidal operations. The truth, and the darkness, isn't out there: It's been right here inside us all along.

...

Travels with the Faerie Queens

To say that Kelly Link traffics in folk and fairy tales is like saying water is wet. From early stories like "Travels with the Snow Queen," winner of the 1997 Otherwise (formerly the James M. Tiptree, Jr.) Award to her new collection, *White Cat, Black Dog*, Link hasn't so much stirred the Cauldron

of Story as torn up the recipe book, serving up banquet after banquet of tales, each one richer and stranger and more delectable than the last. Save one, the seven stories in *White Cat, Black Dog* have all been previously published. Their relation to well-known tales is made clear in the subtitles provided here: “The White Cat” for “The White Cat’s Divorce,” “The Musicians of Bremen” for “The White Road,” and so on. Often (usually, always?) the connection seems not exactly random or tenuous, but sideways.

“The Game of Smash and Recovery” (“Hansel and Gretel”) takes place within a generation starship, or perhaps a sentient warehouse, or a computer program, on a moon or planet where two children, or AI constructs that view themselves as children, have been left by their parents—beings the children, Anat and Oscar, refer to as parents, anyway. Apparently unmoored in time as well as space, Anat and Oscar play the titular game, a kind of hide-and-seek, amidst aliens and robots and fragmented memories. The lines between human and transhuman are blurred here, as in the work of Iain M. Banks, to whom the story is dedicated. As in John Crowley’s *Engine Summer* (1979), the point of view is scumbled. Are we reading a story recalled by a person, an AI, a recording of something whose memories were those of a human? As with much of Link’s work, narrative conventions like plot and motive are secondary to the creation of a state of consciousness that, to me, feels oneiric. She evokes John Gardner’s “vivid and continuous dream” of fiction better than almost any other writer I can think of.

Other stories are easier to parse: post-apocalyptic grief and a touring theatrical company in “The White Road;” the lovely, eerie winter’s tale “The Lady and the Fox,” a riff on the Scottish ballad “Tam Lin.” In “Prince Hat Underground,” an unlikely contemporary mashup of Iceland’s huldurfolk and “East of the Sun, West of the Moon,” a New Yorker journeys through a hellish underworld in search of his lost lover. “Do not fear the darkness,” his guide, Saemundr, tells him, “but proceed carefully and I will tell you the way you are to go.” And later, “A little farther still. Still, a little farther.”

It’s advice that might come from Link herself, for readers finding their way through her stories, many of them curiously labyrinthine despite their brevity. “Skinder’s Veil,” the longest and, for my money, the strongest tale

here, is on the surface one of the more straightforward (its connection to “Snow-White and Rose-Red” feels more tonal than obviously thematic). Andy, a grad student who after four years has completed only four pages of his dissertation (amusingly and perhaps tellingly titled “An Exploratory Analysis of Item Parameters and Characteristics that Influence Response Time”) agrees to take over his friend Hannah’s housesitting gig in Vermont while she tends to her ailing sister.

It seems like a sweet deal. Hannah pays him nine hundred bucks. The house, while remote, is cozy and has decent enough Wi-Fi. Groceries are delivered weekly. Andy will finish his dissertation! And escape his odious roommate Lester! There’s even a generator if the power goes out. Also, a good supply of cannabis he’s brought with him.

As in classic fairy tales, there are rules attached to his stay, laid down by Skinder himself and passed on in writing by Hannah.

TWO RULES. DON’T BREAK THEM.

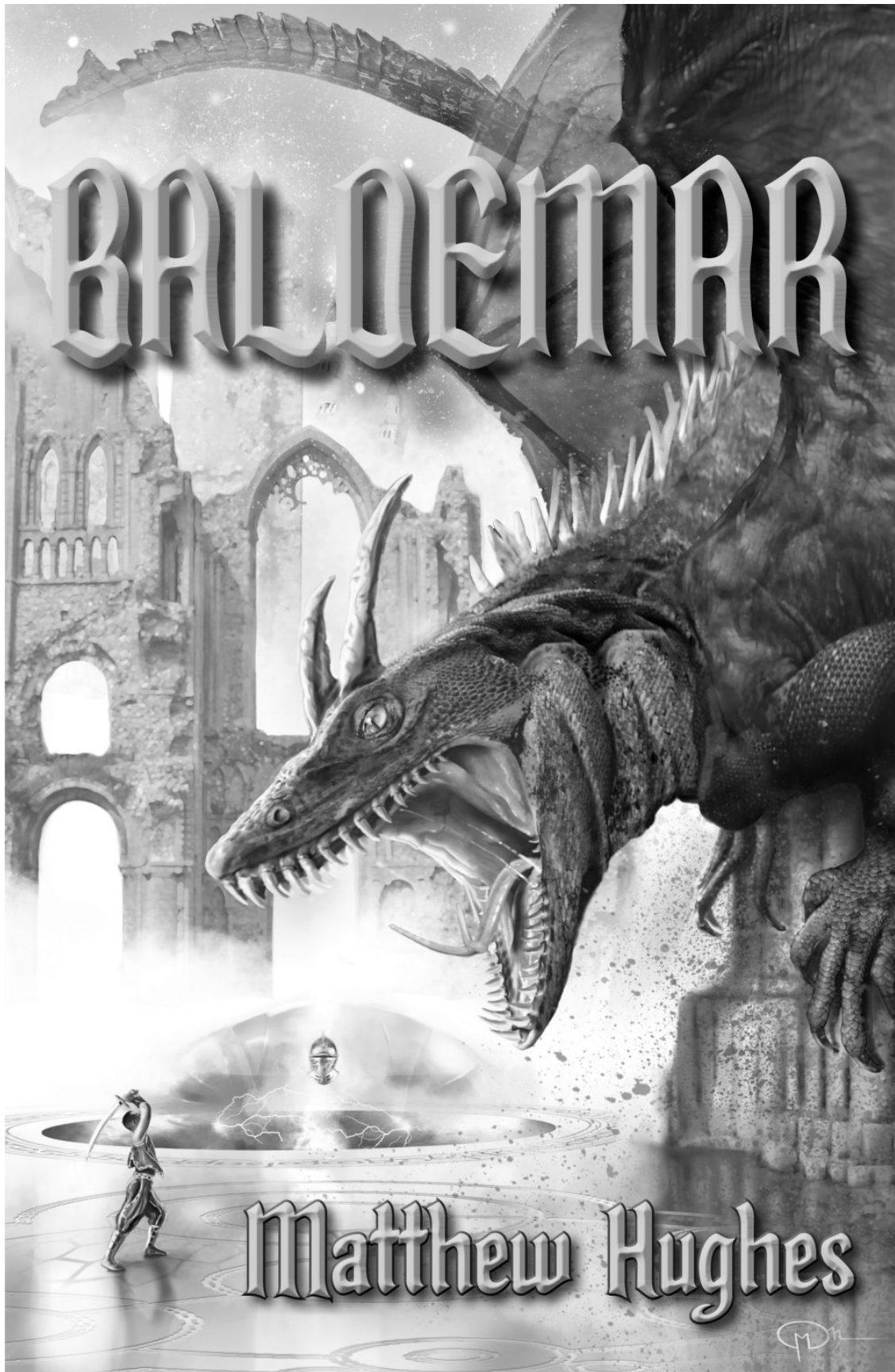
RULE ONE! IMPORTANT! If any friends of Skinder show up, let them in, no matter what time it is. No matter who or what they are....

RULE TWO! THIS ONE IS EVEN MORE IMPORTANT! Skinder may show up. If he does, DO NOT LET HIM IN. This is HIS OWN RULE...Skinder may not enter his own house. No matter what he says, he is not allowed to come in.

Andy, like the youngest son in folktales, obeys the rules, even when the guests arrive in the middle of the night and include two deer and a bear. More intriguing is Rose White, who is Andy’s own age and who takes him to bed during her stay. Each night after sex she tells him a story, which might or might not be variants on the same story and may be about Rose herself, or perhaps her twin or even someone else entirely. Each morning when Andy awakens, he finds that he’s written several thousand words of his dissertation, pages he has no memory of writing. Is it the psilocybin? The weed gummies? Rose herself? After Rose leaves, another visitor shows up, a middle-aged man who doesn’t speak but, to Andy’s relief, doesn’t stay.

The last human guest is Rose's sister Rose Red, who looks like Rose White but has green hair and sharper features. There's also a bear, who tells Andy another story, as does Rose Red. Both stories are vaguely minatory: their meaning may evade Andy, but probably not the reader. The final visitor is not surprising, though the story's ending is—surprising and clever and brilliantly satisfying, like all the best fairy tales. “Skinder’s Veil” first appeared in *When Things Get Dark*, a 2021 anthology of stories inspired by Shirley Jackson. But despite its Vermont setting (Jackson lived and wrote in Bennington) and eerie old house, “Skinder’s Veil” feels more in the vein of John Crowley’s work, with its talking beasts and matter-of-fact irruptions of the marvelous, not to mention the twin sisters named Rose, as in Crowley’s *Dæmonomania* (2000).

“Skinder’s Veil” is a stunning story. I’ve read it three times, and each time find more to admire and puzzle over and delight in, a continuing sense of the author urging me to continue, that there’s yet more to be discovered if only I persist. “A little farther still. Still, a little farther.”



All the Baldemar stories, plus two that never ran in *F&SF*. Ebook \$4.99,
paperback \$14.99 on Amazon.

R. K. Duncan is a fat queer polyamorous wizard. He writes, cooks, and dreams of travel or utopia from the same venerable West Philadelphia rowhome where he was raised. The inspiration for this story came first from Robert Bloch's "That Hellbound Train" and second from the quote by the fictional Richard Nixon of Austin Grossman's novel Crooked: "The real cold war was between the living and the dead." While this is his first story in F&SF, his short fiction has appeared in numerous anthologies and magazines since 2017, all of which can be found linked at rkduncan-author.com. Lately he has devoted much of his writing energy to seeking representation and publication for long form works, including a novella that continues on from this story.

Meeting in Greenwood

By R. K. Duncan

I sit in the cavernous departure hall of 30th Street Station, Philadelphia, in a suit cut for 1898, hoping my train will come before the morning crowd has emptied completely. I don't draw many looks yet. A business suit, even a seventy-year-old one, is still camouflage in the train station, and I am professionally unobtrusive; I have to be, working for an agency secret enough no one would recognize my badge or believe they shouldn't arrest me because of it. Marble walls and soaring columns the color of over-milky tea give the space a temple architecture, appropriate for one of the few great train palaces left to us, appropriate for a departure to my destination, no matter what you think of neoclassical excesses.

I check my watch again, but the hands are still spinning like compass needles at the pole. No sign when my train will arrive. It's not hard for the Service to find a day and make the rails bend right, but the ferryman keeps his own hours and we can't predict them with any certainty. I study the photograph again, a cameo-style oval picture of a Black man in a suit very like mine, wearing a goatee and a stern expression. Robert Stones; died 1913, Langston, OK. Known to the government by nothing more than census records and papers for his childhood emancipation when he was alive. He made his own approach, crashed a séance and said he had things the Service needed to see, papers and reports about the next move in our chthonic cold war, but the medium lost contact before he could give details beyond Richard Nixon's name.

That was enough to make us interested.

I am an officer of the Third Service, as a Brit would call it: one intelligence agency working abroad, one domestically, and us, the one without a name. We operate not overseas but across many rivers, and we don't track criminals and infiltrators or combat the menace of communism. Our business is the long cold war of the living against the dead. Technically

we predate both the FBI and the late-coming CIA, as our official foundation is counted as a gathering of theosophists and mystics who spoke with President Lincoln hours after his address at Gettysburg, and our mission crystallized as Reconstruction failed. Our relationship with sitting executives and Congresses is likewise more complex than our cousin agencies', given how many Representatives, Senators, and even Presidents have been intentional or unwitting soldiers for the Lost Cause.

One of the lines on the clacking announcement board turns blank; speakers crackle with a present silence; shadows deepen around the stairway to the indicated platform. I flip my watch open again. Steady at seven minutes past nine. My train will be departing soon, its route drawn red in blood over the faded ink of the Reconstruction-era map in my breast pocket.

No one notices or joins me as I go down the stairs; I pass through the departure hall, appropriately, like a ghost.

The platform is packed, but only with wisps and shadows. I am the only living person there. The train is black with soot and age, belching steam, and it bears distorted icons of many defunct carriers mashed together. The conductor gives a death's-head smile beneath a Pullman porter's cap and does not ask with word or hand to see a ticket, just nods me in. The frames of my clear-lensed spectacles are milled from 1877 double-eagles, and that suffices for the fare.

I sit in an empty row and look out the window, marking the stations of descent. I know this passage well, from more than twenty crossings, but each time adds a little tarnish to the soul, and it is less if I maintain attention and don't let myself change with the shifting fashions of the train.

We cross the Styx and not the Schuylkill as we leave the station, and then swing slowly through the turn to our long eastward run. The ferryman has judged my fare and I sit unmolested, but more than one ragged bundle drops from a railroad bull's hands down to the waiting water: the dead who passed without a fare on this day like any other in a great city.

I see my opposition just after the first crossing, and double-take as Charon counts his coins. He spills a handful haphazard into the ferryman's white glove, the sign of an amateur. His tell is amateur, too: a Goldwater pin

on his lapel, proclaiming *In Your Heart, You Know He's Right*. You'd think no one would wear something so obvious on a secret mission to the underworld, but I have it on good authority that the story of a CIA man caught with his class ring in Cuba is gospel true. Here, it makes me sure he's a living traveler like me, not just a committed Goldwater man making his last descent: The dead keep no treasures. Even if there had been a young man so devoted to last cycle's Republican candidate that he wore the pin to his untimely grave, it would be gone to pay the boatman now. Only a living man could wear that shine and pay with other coins.

There shouldn't be another living man on the train, and if there is, it should be a lost dreamer or a wild talent, terrified by what he's stumbled into. That button means this twerp is from the opposition.

He shouldn't be here. They don't do this, don't travel into the memory of the nation where the restless dead remain like flies in frozen honey. The Service's methods are unique; we are the carpetbaggers and the railroad men. The opposition has their own ways of getting secrets and direction from the dead, their monuments and mountain oracles, icons and flags and white-hood communions where their rebel angels can whisper the next moves of their long rise again. This traveler with tokens of power not sent by the Service is altogether new.

And that means I don't have a plan.

He sees me seeing him and raises an invisible glass. Cocky little shit. He's too smooth, and his gray suit's too pressed, and his blond hair's too pale. He looks like he was stamped out on an assembly line buried under Yale or Princeton and discarded here, a factory-second William Buckley.

We just watch each other for a while, and the miles roll west, and the years roll back. I don't know how to deal with this, but I'll have to find a way to stop him tailing me to the meeting. I'm here for something to undercut the Nixon run everyone knows is coming, him and that warlock, Kissinger. We can't let him and his dirty tricks gain steam. We won't survive another fully empowered opposition President.

The Service is still clawing back from Wilson. He had the Klan marching down Pennsylvania Avenue and planting flags for the army of the dead, lynchers and massacre-men in his cabinet, the hard cut of segregation in the

government, and he did more behind the scenes, blocked us off from most official funds and channels of support. That was the Service's biggest setback since foundation, and we were barely playing catch-up until Truman. Progress in those thirty years was on the ground, without supernatural help from us.

Lethe is wide as the Mississippi, bright and still as a silver mirror, and we span it on a bridge of monuments: generals and presidents, stone swords and bronze horses all jumbled and fused into the columns of a railroad bridge that looks fine as a hair against the shining water. This crossing is the first one to change the feel of the train and conjure an older time as we pass through forgetting into something not quite memory, the other America that might have been and is not anymore. The map in my pocket rustles against a phantom wind, holding this train on a course to the past as it nearly was. I wonder if the Goldwater man meant to stay on this track, if he's here for me at all, or if he meant to make the change into some minstrel-show fantasy to meet with his unconquered antebellum idols. It's not an absurd thought, as much work as their side has done to make that place real in memory that never was in life.

Only a few miles past the Lethe bridge, a gray-coated officer with a gold-chased saber comes in from the trailing car and sits beside the Goldwater man. For a moment I hope he's another traveler, playing at reenactment, but there are golden hoops around his eyes, the rims of his fare left like a punched ticket on paper-dry skin. He's dead and out of time. That's bad. That means this isn't just an exploration. The other side's made contact already and sent the Goldwater man for a planned meeting, or else he's an adept himself and he called up a revenant to throw me off the train. I try not to think down that track. It ends somewhere I can't weasel out of. Even just him being here, out of time, means the other side is close to something, has broken bonds that should still be secure.

Acheron runs across the plains beyond the Lethe in a thousand channels carved by gray columns and blue, by wagon train and Indian removal. The ripples crack like whips and gunshots, and the smooth water reflects hanging bodies and scarred backs and long, hard roads into the west. The traitor drinks it in, growing with every mile and every year peeled back. He spreads a shadow like the terror of a looming whip hand through the car.

I've got to think fast and find some way to lose the ghost and the Goldwater man before I step into theater. As frightening as this revenant is on the train, there are rules in the ferryman's domain, most importantly against boarding without a fare. In-theater, I won't have just two of them to deal with. I don't carry a gun, and it would be dubious against the live man and useless against the dead one if I did. I'm an intelligence officer, not an assassin, not James Bond, not even Sean Connery. So, this plan will have to rely on brains, and thus, on trickery.

I keep watching them. They talk, but the Goldwater man can't keep his eyes on the Confederate, or on me. He flinches at the whistle and the creaks and rattles of the train as it settles into different ages with the steady clicking of the wheels. He hasn't made this trip before. That will have to be my opportunity. He doesn't know what's coming.

We don't cross Phlegethon's fire or Cocytus's screams until almost the Tulsa Union Depot, but both of them flow through the burning of Black Wall Street. Guns crack; people cry out, and 1921 is walls of flame on either side of us. I make my move while the Goldwater man's dazzled and the rebel's basking.

I go for the door toward the leading carriage and the engine, and I can't help but shoot two worried glances back at the opposition as I pass them. They notice without time to think before I'm out of reach. The second look back, one hand on the door handle, makes sure they've taken the bait.

Just like an amateur, the Goldwater man is half a step ahead of his in-country muscle.

He reaches for me with both hands, and I step inside them, close as an embrace, so I can feel his pockets. He's not a fighter, and I was ejected from three high school wrestling tournaments before I joined the Service. He hesitates while I rip his button off with my teeth, pull the overwritten highway map from his back pocket, and slip the unwound watch from another. They clatter on the floor, and he tries to reach for them, but I'm close enough to kiss. I hold him tight, my arms under his armpits. I kick the door open, lift him off firm footing, and swing him round like a dance partner to tumble from the moving train into the conflagration. We'll see if he can find his way back out of that.

The graycoat's looking furious, and I'm probably only still alive because the doorway's too tight for him to draw that saber, but he steps back to clear it. I don't know what will happen if he cuts me here, but I'm fairly certain death is one of the less-bad options. I fumble out my badge, holding it up like a cross for a vampire. Some bindings should still hold, and if they don't, I won't live to regret false optimism, thought that might not dull the pain.

"By the articles of Appomattox, the Department of Transportation Act, and the authority of the Federal Railway Administration, I, Timothy Jackson, duly sworn and bonded federal agent, disarm and deny you. Let your weapons be thrown down. Let you be cast out from all federal jurisdiction."

The revenant steps back; his spreading cloak of fear shreds, and he fades into smoke as gray as his uniform and then to nothing. The scent of Tulsa burning fades, too, and we pass through the fire.

It's always fifty-fifty whether that kind of legalistic exorcism works across the rivers, but the surrender's never lost its psychic weight, and I am, technically, by virtue of documents signed under glamor, deputized by the railway administration while I'm on the train.

The train stops at a platform that shouldn't exist. The depot was built over Greenwood's bones, but the train has to stop somewhere, and the bending of the rails through endless strata of negotiated memory often leads to paradoxes. Field officers like me are encouraged not to think about it.

The street outside the station wears the clothes of Tulsa in the summer of 1898: knocking engines, complaining horses, and people-shaped things going about their business and chattering in a western accent not yet wiped out by the dustbowl. Most of them are just that, shapes providing atmosphere, chorus players masked with the faces of souls gone wherever souls go when they consent to going. Only the restless stay; the ones who won't continue to wherever they're bound and stay to nurse old grudges, or watch over their children, or to keep out of some hell they think they're destined for.

Knowing the difference doesn't make it easy to pick out the leads from the chorus, and I can feel a drizzle of sharp looks as soon as I step into the

street. I don't suppress my nervous glances back; the dead will know me for a carpetbagger if they're watching. Stones's intelligence is urgent, or at least he thinks it is. There wasn't time for a real cover operation, to build me a legend from grave dirt and death certificates and send me back as one more dead among the silent majority that drifts here beyond the rivers. My suit's a nod to protocol, not a disguise.

I just have to hope the opposition hasn't gotten word of this meeting, that the Goldwater man was on my train for reasons of his own, and there isn't a welcoming committee ready. Who knows what the opposition, especially the dead one, could mobilize if they knew I was coming?

I do. I know exactly what they could send after me. That's why I'm keeping to a mental universe where it's not happening.

Arranging a meeting with an elusive spirit like Stones is a little like fumbling with a Ouija board, a little like screaming into an open grave and hoping the devil hears you. The exchange is set for a diner called Sandy's, six blocks from the station. The sign is a white rooster with a red tail, the same as one our haruspices killed to confirm I should go there.

Nothing stops me from reaching Sandy's and sitting in an empty booth, standing out like a sore thumb to any of the dead still there enough to notice anything. A shade with nothing behind her eyes brings me coffee, and I don't drink. No officer of the Service has ever confirmed if the pomegranate thing is real, but that means no one's ever proved it isn't, and plenty haven't returned from trips like this. I haven't seen the dawn break looking east across the Styx so many times because I take stupid chances.

Robert Stones comes in with a banging door and eyes that sweep the room like spotlights. His shoulders are hunched, nervous, but that doesn't reach his face. His mouth sets in a grimace of a smile, and his eyes are black with too-big pupils burning like sullen coals, the eyes of one held here for vengeance. He sits at my table and takes a long drink of cold coffee, daring me to complain.

I give him the sign agreed on.

"John Brown's body..."

"Was buried by the Union," he replies.

He chose that call-and-response and whispered it in dreams to my line manager. I think I'm supposed to be offended, and I might be if that feeling didn't have to get in line behind the little fear of being caught here by the opposition and the storm-cloud terror of the sea change signaled by my train encounters.

Stones sets a battered briefcase on the table, and I reach inside my jacket for the Library of Congress stamps that will let me preserve his information for travel back across the rivers. A quick exchange and I can be aboard the train, and safe from what the nape of my neck still thinks is breathing there.

"What do you have for me?"

He leans forward, too intense for a first meeting. A new contact should be tentative, should be the one glancing over his shoulder, the one too shaken by the idea of espionage to be businesslike.

"Everything you oughtta need. Nixon fella's reading from a hymnal that belongs back here, back with the rebels. I hear things are changing up there, too. Your other team thinks they've got a chance for something big."

It's no surprise a dead man has intelligence like that. The dead have many ways of getting letters; the fire and the shredder, the forgotten dreams of the conspirators, or maybe these are letters written by the dead and floated lifeward on the rivers with insufficient care. After the train and its portents, I think I know what something big Stones is thinking of.

"Do you mean a rev—"

Bugles and hoofbeats cut me off before I can finish, and lead weight sinks my stomach to some deeper pit than this one.

Whether I was made leaving the station or one of the opposition I threw off the train got a word out, this is what they can do, here in the dead places where only the ones afraid of hell stay long. They've called the Wild Hunt, and now it has my scent at least, and maybe Stones's as well.

Already the torchbearers are in the street outside, passing like ghosts in their white hoods, riding their night-black horses, firing into the sky to call the thunder. More will come to their bugle-call. They'll come bearing the cross, breaking down doors and windows to drag out carpetbaggers and

collaborators for the burning. They'll dig until the dirt ends to cast the Black dead into a deeper bit of Tartarus for daring to collaborate with me.

"Have you got another way out of here?" I ask Stones through lips tight enough I almost can't hear my own terror.

There's not much I can do against the Hunt this deep in-theater. We have ways of dealing with the dead and the Klan closer to life, between the rivers. I used some of them on the train, but here beyond the five borders of death, we run, and even that is wasted effort with the Hunt already up and on our heels.

Not that I won't run till they catch me. I've seen what returns after tar-and-feather under the burning cross, and I'm perfectly willing to waste effort on the thinnest sliver of a chance not to give other officers that education.

Stones smiles at me with eyes that would be wild if I could see that past the rising flames.

"Sure, if you can take the heat."

I nod too hard, bobbling like my head's on a spring. The Klansmen are outside in force now, and a first blow cracks the glass.

Stones pulls me up by the tie and drags me behind the counter, through the steaming kitchen and out into cluttered backstreets that don't get cooler, even when overhanging tin roofs and washing lines cut off the sun. He doesn't let go of my tie, and I keep my head down and run after him, surveying the terrain in fleeting glances.

The heat keeps climbing. I see the chorus scatter. Black dead who remain shoulder rifles and load revolvers. The bugle-calls ring out from the main streets on either side of us and running feet slap on the dirt behind. Ahead of me, Stones thins. The legs of his trousers flap and billow. The hand on my tie melts to deeply lined skin and knobbled bones, and on past age, desiccating in the deadly heat.

Stones is stepping past his time, into an underworld remembered after he was dead. The thinning is the sure mark of a revenant.

With that, I realize his plan, and where we're going.

It's 1921 ahead, and Greenwood's always burning. It's a little like my trick from earlier, but much savvier, now I see what's happening. I had to throw my opposition out, but if we lead the Wild Hunt this way, they'll run on into the massacre without a push. They won't be able to stop and grab us off this street against the draw of that great fire; what eternal spirits of slaughter and hatred could resist a race-riot and arson on that scale?

Even as I think it, Stones stops us just before, the fire near but not around us yet, not quite, and the Hunt rides past with warhorns clamoring. It's all I can do not to throw myself on the ground and cower as they pass. It feels like each hoofbeat palpitates my heart, and I'm panting and sweating with more than the heat once they've gone by.

Stones shoves a sheaf of papers at my chest.


"That's all of it, how this Nixon means to wake the rebels, and how they'll help him in the fall. You'd better find a way to stop it."

"Thank you, I understand how hard it—"

He cuts my rote praise short with a rough hand on my mouth.

"No words. Make it happen. Remember, white boy, no matter how much you say the war's not over when you're back on your side, you're not in it. The war is here."

He turns and walks away from me, receding faster than his steps, letting the underworld pull him back to his own time.

I sit with his words while I mark the papers, and the sweat makes my hand slippery on the smooth wooden handle of the stamp. There will be time to read later, on the empty train back to the living world. 



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Samantha H. Chung is an author and weird pigeon enthusiast from Los Angeles. Now an undergraduate studying English and East Asian Studies at Harvard, her work has appeared in Fusion, Fragment, Greater Than His Nature, and more. "The Pigeon Wife," which transplants a Korean folktale from her childhood into the East Coast gloom of her present, is her first appearance in F&SF.

The Pigeon Wife

By Samantha H. Chung

The day I decided to get a pigeon husband, I looked at my best friend Amber and said, “I think twenty-six is the worst age of a person’s life.”

My claim suffered from recency bias—I was twenty-six then, and Amber had only recently turned twenty-seven—but I still think it’s mostly true. I was four years out of college, hopping between temp jobs and freelancing when I could. I lived in a studio with a roommate I didn’t talk to if I could help it. I would have moved out of New York, but I had followed my ex-boyfriend there two years prior and didn’t have the heart to start all over again. Amber was in a slightly better position than I was, but only slightly, and she’d had a pigeon husband since college.

It’s a well-known fact that pigeon husbands alleviate suffering. Before that twenty-sixth year I’d never sought one out for myself. This wasn’t because my parents had thought to instill in me any sense of individualistic duty or do-it-yourself attitude (they hadn’t). I had simply never considered the option available. To me, pigeon husbands were like cotillion or ecstasy—they just weren’t something I did.

I knew some other girls who had them, mostly from the small liberal arts college I’d attended. There I’d learned about an entire industry of professional trappers who parents hired for their daughters, who bagged twenty or more birds from a single roost and sold each one for the price of a new car. *Happy birthday, sweetheart. He’s yours now.*

The tipping point was when my roommate broke up with me. The preceding year of my life had been a series of compounding misfortunes. The ever-present specter of student loans. A fine for a missed credit card payment that led to two. Then the copywriting gig I’d had for six months decided they no longer needed me. The day I got that email, my roommate told me she’d landed a role in Los Angeles. An hour later, I told Amber that twenty-six was the worst age.

I would have moved back home, but by then, my father had stopped responding to my calls. And after the fourth unanswered voicemail, I decided, *Fuck it, time to trap a bird.*

There were plenty of how-to guides on the internet for acquiring a pigeon husband. It turned out the world was full of people like me—girls running low on both patience and cash, who were willing to get their hands dirty for a little leg up. I wouldn't keep him forever, I told myself as I tracked down the nearest roost on Google Maps. Just until I landed a job stable enough to live on my own. Then I'd let him go.

I remembered videos of wildlife rehabilitators who would toss bald eagles into the air. First they would plummet, frozen from the shock of sudden freedom. But after the first few seconds of freefall, they would flap their wings and begin to rise. They could fly, they would realize! They just needed a little boost. They would flap higher and higher, and eventually disappear into the skyline. That was how I imagined my pigeon husband. That was how I imagined myself.

I'm keeping the location of where I poached my bird secret for now, just in case anyone thinks they can try their luck there, but I'll say it was out of the way, a park you wouldn't really want to end up in if you were a pigeon.

It didn't take long for a pigeon to show up. I watched from under a shop awning, invisible in the darkness. He was a silhouette, maybe five-eight and bent over in a long, dark overcoat. I thought he was another trapper at first. But then he disappeared in a puff of feathers, silver and black in the half-moonlight, and the coat crumpled onto the pavement. Stupid birds. They never learn.

The pigeon now perched on the rim of the fountain, pecking ripples into the water. If it hadn't been so dark, if I hadn't been distracted by the dopamine rush of, *There it is, my savior and salvation*, I might have noticed his feathers were a little scraggly around the neck and tail, and he hopped around with a limp.

But I didn't notice any of those things, so I pounced.

I dove for the coat first, scraping my knees on the concrete. I snatched his shoes as well for extra security—workman's boots made of heavy, stained rubber.

The pigeon squawked. He flapped his wings, but it was no use. His beady eyes fixed on me with menace. *Give me back my clothes*, they seemed to say. *Give them back to me, or else*.

I held the coat and boots tighter to my body.

“No,” I said. My voice echoed in the night air. “I’ll keep these clothes, thank you very much.”

The pigeon flapped again, clearly distressed, and gave a full-body shudder. It flopped onto the pavement, spasming. And then it started to change, limb by limb, shedding feathers and claws until what lay on the ground was a man, naked and curled up in a fetal position.

Here he was, my frog prince, my genie in a bottle. I walked closer, shining my penlight onto his face, and he cringed away from the glare. He was an old man—probably in his sixties, white, with a tangled mop of gray hair and a beard that was in just as bad shape. Whatever this pigeon husband was, he was *not* the cream of the crop. Maybe, I thought, I would be better off returning his clothes and coming back another night. But who knew if the next pigeon husband I caught would be any better? Given my luck, it would be worse.

“I’ll take you,” I said, and held out my hand. He stared at me for several long moments. Then he took it, too.

• • •

I had bought a lockbox in anticipation of my pigeon husband, and I put his coat and shoes inside it as soon as we arrived home. The key I would keep on my person, hanging from a string tucked under my top.

Many of the online retailers I’d seen offered promises. *Guaranteed full, intuitive integration into society in three days. You won’t have to lift a finger*. My pigeon husband, wild-caught, had a little more trouble than they advertised. For the first two days he pecked at the ground, refused the food I cooked for him, and bobbed his head back and forth as he walked. He cried out sometimes, weak, strangled noises that didn’t fit inside a human mouth. Every few hours he would stand in front of a window and attempt to fly away. I was lucky the apartment was on the first floor.

His pigeon nature never quite wore off, either. From his initial entrapment until the day he left, something about him remained birdlike.

“Your pig’s defective,” one of my neighbors said as I helped my pigeon husband walk down the hallway. “You should get a refund.”

“He just needs some time,” I said. “And don’t call him a pig.”

After a week, I deemed him adjusted enough to take outside. I shaved his beard and combed his hair. Then I dressed him up in one of my ex-boyfriend’s sweatshirts and walked him to Nordstrom to buy a suit. I winced at the price but reminded myself that a good suit was an investment. Good suits led to good jobs, which led to good money. And that money would go straight to me.

The night before I sent him out, I sat him down at the kitchen table for a talk. He ate what I served him now, and he cut his serving of chicken breast into polite but too-small chunks as he listened.

“I want direct deposits into my bank account,” I said. “No separate finances. I’ll pay for groceries, rent, utilities, anything both of us need. A small percentage set aside for savings. The rest will go back to you, in cash. You can spend it on yourself. Is that fair? I think it’s fair.”

He nodded. My pigeon husband still didn’t speak. Speaking was a crapshoot, the how-to guides said. Some pigeon husbands figured out human speech right away, while others took longer to pick it up. A few never spoke at all. Mine was of the last category. The whole time I had him, he never said a word.

I had built this set of rules from a certain sense of moral duty, the conviction that I wouldn’t encroach upon his freedom any more than I had to for our shared survival. I would not use the money he earned to buy luxuries. I would not take more than I needed. And in return, he would go out into the world for me, into the financial district or wherever pigeon husbands went. Wearing the new suit I’d bought for him, he would find a job that recognized pigeon husbands for their valuable contributions to society. He would generate income, freeing up my days to search for work in earnest. I would have a financial buffer, the small luxury of ignoring the worst of the job openings I’d been stalking before. And once I was in a stable place, I would let him go.

Was that fair? I thought it was fair.

• • •

The first thing I did when my pigeon husband got his first paycheck was clear the debts. The loans, the bad credit, the missed rent payments—all gone with a keystone. Then I hopped onto his health insurance. Money really could buy happiness, and that day, I understood why men became billionaires.

I stuck to my promise, spending only what I needed and saving just enough for the future. Every month I cashed the extra money, leaving a small stack of bills on the counter for my pigeon husband to take. He kept the cash inside a black briefcase in his closet. When I learned that he left it unlocked, I was flattered by his trust in me.

I'm sure he saw the key around my neck, and he wasn't so birdlike as not to put two and two together and come up with four. But he never attempted to steal the key from me, or to force the lockbox open.

I rarely saw him during the day, when he worked. At some point he taught himself to read and write, and he started leaving Post-it notes scattered throughout the house. *Buy more muesli. Brought leftovers to work. Feeling pink today.*

Once I found a phone number scribbled on a half-sheet of toilet paper that had stuck to the rim of the trash can. It wasn't a number I recognized. I didn't have anything better to do that day, so I called it.

The phone rang five times before someone picked it up.

"Pass-coo?" a croaky voice on the other end asked, punctuated by loud static.

"I can't hear you clearly," I said.

There was the sound of shuffling, and then a thud, as if the person holding the phone had dropped it. Beneath the static, two people were arguing, but I couldn't make out what they were saying. After a few seconds of this, someone shouted, and the call ended.

In the evenings, I told my pigeon husband my secrets. I revealed to him my petty jealousies and hot takes. I told him about my father. He never really listened to me—he was always distracted, either thumbing through a newspaper (I didn't give him a phone) or hunting around for dry cereal. But every once in a while he seemed to sympathize. That was how I learned to read his eyes—bright with indignation, soft with confusion, glinting with concerned agreement. By the fifth month I could usually tell how he was feeling, despite neither of us having the words to describe it.

Even now, I don't know what he thought of me.

By the end of the first year, I'd saved enough of our money to leave the studio apartment. I made a down payment for a house in Brooklyn, a one-story with separate bedrooms. The stacks of leftover bills got bigger after that. When the first briefcase filled up, I spent some of my own savings to buy him a second.

The second briefcase seemed to delight him. It had never occurred to him, perhaps, that he could buy things like briefcases for himself. He started making purchases—but always frugal, always saving more than he spent—and kept them on the windowsill. I suppose he was nesting. There was no rhyme or reason to the things he collected. A six-pack of Coke. A Christmas ornament shaped like a heart. A green whistle.

I kept him away from Amber for that entire first year. This was largely due to embarrassment—a teenage emotion, but one I suffered from deeply nonetheless. Her pigeon husband was built like a football player, and mine just didn't measure up. But eventually, after several weeks of her steady insistence, I invited her to brunch. She asked to bring her pigeon husband along—she called him Emmett—and I had no choice but to say yes.

"It'll be cute," she said. "Like a double date."

My pigeon husband was a picky eater. He stabbed gingerly at a poppy-seed muffin with his fork, then lowered his head to the tablecloth and took a tiny bite, which he chewed for a full minute before swallowing.

Meanwhile, Emmett tried to make conversation with him. Amber's pigeon husband was one of the lucky ones. (Really he was one of the expensive, good-quality ones, although at the time I had still convinced

myself that speaking was a result of random chance.) He had the voice of a sports broadcaster and the vocabulary of a tenth grader.

“So, what do you do?” he asked.

“He works in finance,” I said. I had become practiced at answering for my pigeon husband.

“What a coincidence. So do I,” he said. “And you?”

“Oh, I’m between things right now.”

During the meal, I noticed my pigeon husband was keeping his eyes trained steadily on Emmett. After he finished the muffin, he—still staring at the pigeon husband across the table—started chewing vigorously on his fingernails. It was a habit he’d had since we’d met, and I’d never made an effort to rid him of it. I wasn’t that kind of girlfriend.

“So, you have a little May-December situation going on,” Amber said when he went to the restroom. “I didn’t know you were into that.”

“I’m *not*!”

I knew some girls had sex with their pigeon husbands. Some of them even had children together. I could see the allure of it—a nuclear family without the hassle of two-way commitment. There had been some outcry about girls ignoring marriage in favor of pigeon husbands. There were memoirs written by sons—the children were always boys—who had grown up thinking their fathers were human, who were tricked into opening lockboxes and got the biggest shock of their lives when their dads grew wings and flew away. Pigeon fathers never seemed to feel any attachment toward their sons.

I had no desire to fuck my pigeon husband. Maybe it was his age, or the residual birdness of him, but our relationship was completely sexless. You could say it was like living with a roommate again, except I was allowed to spend my roommate’s money and he couldn’t leave or tell me to stop.

The arrangement was exploitative, but it was hard to see those things while living in the middle of them. The generation that came after us arrived more attuned to how power shapes the way we walk through the world. The way he was the breadwinner, and I baked his bread. It was how families, white families, good families, had done things for decades.

But I don't blame them for not understanding. Pigeon husbands were so commonplace back then, no one really batted an eye if you had one.

"It's only temporary," I told Amber. "Until I can find a sustainable career."

"Look at you, a better woman than the rest of us."

I didn't tell her that my job searches had dwindled sharply, or that I had begun entertaining the idea of not working at all. My pigeon husband, after all, was doing well for himself. He'd gotten promoted. I could tell from the size of the monthly deposit into my bank account.

Plenty of creative types—artists, writers, inventors—had pigeon husbands, allowing them to pursue their craft unhindered by financial strain. Some even had their husbands subsidized by the government. But I wasn't an artist, and I had no intention of becoming one. I was bored, walking from room to room in an empty house, and yet boredom was still preferable to the alternative. I was the country's only data point against UBI, a Reagan-era wet dream, and a parasite living off the goodwill of a species we'd learned to entrap for our own gain.

"You haven't given him back his clothes, right?"

I shook my head.

"Keep the clothes for three years," Amber said. "After three years, he won't want to leave anymore. They get...used to it here. They realize that life as a pigeon sucks, you know? I mean, a bird can't go two steps in the city without having to dodge someone's dog or a kick from a kid. Compared to that, a nine-to-five is like paradise."

Maybe that was it: I simply hadn't suffered enough. I had struggled, sure, but I didn't know what it was like to be homeless or starving. Or friendless. No wonder I didn't see the appeal of a productive trajectory for my life. I had been carried along this whole time like a bottle on the ocean, unaware of the waves pushing me forward.

When the check came, he grabbed it right away and started scribbling on it. I was surprised, but also a little proud. *See?* I wanted to say to Amber. *We can even afford brunch now.*

Emmett cleared his throat and smiled, showing white teeth. “Don’t worry about it. We can cover today.”

“There’s no need—” I started, but my pigeon husband was already sliding the check across the table as Emmett reached for it. For a moment, my pigeon husband’s wrinkled hand slipped underneath Emmett’s young one. They both froze for a fraction of a second—sometimes I think I imagined it—in that tableau of touching.

Then Emmett pulled his hand back, moving the check with it. He lifted his hand, scanned the number, and placed his black card on top of the shiny slip of paper.

“Let’s keep in touch,” he said to my pigeon husband as we walked out, in that radio-host voice. “I’ll give you a call.”

Amber hugged me good-bye, and out of the corner of my eye, I watched our two pigeon husbands shake hands, friendly and firm.

• • •

We all know how this ends.

I didn’t do a thing about my guilt other than bury it. Even as I spent my days aimlessly wandering Brooklyn, then returning to the house to cook and clean and wait for my pigeon husband to arrive home, I never thought of myself as a housewife. Depending on the day, I was a freeloader, an heiress, a flâneuse.

He told me on a Thursday. He ate his dry cereal, straightened his tie, and left for work, as if nothing was unusual about the day at all. I didn’t suspect a thing until I opened the fridge at noon, hunting for leftovers. There was a Post-it note attached to the lid of a tupperware holding day-old salmon, perky and pink.

I’ve gone on strike.

I ran outside in my socks, lunch forgotten, and stood in the driveway looking like a fool. In the middle of the day, the street was perfectly silent—the peaceful quietude I had incorporated into my dream life, the enduring silence of my pigeon husband. Above, the sky shone a radiant blue.

When it became clear that the world was not ending, that the filtered stillness of a Brooklyn suburb would continue even as my own life crumbled around me, I went back inside. I stuck the Post-it note words-down on the counter. And then I ran a Google search.

Unbeknownst to me, my pigeon husband had been working. Organizing. Making calls, holding meetings, sending out birds to hold up signs on the street. Two whole years, and I never knew the person I shared my house with was a modern-day Cesar Chavez in a three-piece suit. I had bought that suit for him with my own money, and he used it to betray me.

Centuries ago, we domesticated pigeons. We bred them to transform between bird and boy. We gave them rose-colored feathers, snakeskin green around their necks, twilight blue in their tails. When they were boys, we made them beautiful, too—sharp jawlines and custom-made jackets, jewel-toned eyes the same shade as their feathers.

Pretty gets you far in this world, and the first pigeon husbands were able to charm. People let their guard down around them. So we used them to relay bad news and to coax other pigeons into offering themselves up as meat.

We made them, and then we abandoned them.

Pigeons were messengers. It was baked into their genes by the very hands that trapped them. It shouldn't have come as a surprise to us that they created networks among themselves, passed telephone-wire codes that said they'd had enough of us, that they wanted to leave.

And apparently my pigeon husband was the big guy, the main man, the organizer at the center of it all. He spoke to those birds in the way he never spoke to me. I admit I was a little proud when I first heard the news. *My* pigeon husband, the one *I* had trapped, the leader of a citywide labor movement? Who said independently caught birds weren't productive?

The day the pigeon husbands decided to fly en masse was the two-year anniversary of our meeting. I was twenty-eight. According to the news, some husbands attacked their girls to get their clothes. Mine didn't have to go that far. When he arrived home, I opened the lockbox and let him have it—the coat, the boots, everything. I even let him take the two full briefcases of cash he'd accumulated during his time with me.

I thought about what to say as I watched him pack. Last words were important, but what could I say that would be sufficient? There was no way to say *thank you* without sounding insincere. *Good-bye* would have been a lie. I didn't wish him a good bye; I hoped he'd be electrocuted on a power line.

In the end, I told him: "You're leaving me alone."

He gave me a look that clearly said, *Yes, that's the whole point*. Then he rubbed the side of his neck against his shoulder.

"I can't pay the mortgage on my own."

There it was—the implicit truth that had haunted our relationship from the start, an admission of my total dependence on him. Op-eds had been written on this. I had read all of them. Would the government rescue us? Freeze evictions, send stimulus checks? The loss of the pigeon husbands would fuck up the housing market for years. Not to mention the companies they'd previously worked for, the industries that would go bankrupt without bird labor.

In the face of the impending doom of society, my personal issues seemed unimportant. I would become a plural noun in the history books that said *young urban and suburban women found themselves stranded, with no income and no marketable skills*. What a disgustingly pedestrian way to be remembered.

So I gave him the key, too, as a sort of souvenir—one last memento from me to him. He left his collection of treasures behind. They're still sitting untouched on the windowsill, sparkling cheekily when the sun is out. I suppose they're mementos from him to me.

The pigeon husbands gathered in the streets of Manhattan, each wearing a suit in shades from black to gray. They packed the avenues from curb to curb. I had never seen anything like it before, and I'll likely never see it again. The photos just don't capture it right.

Then out came the stolen clothes—the coats, the scarves, the shoes and rings. An explosion of every color with no regard for aesthetics. I imagine you could see it from space. The husbands collectively seized, arching their backs at the same angle toward the blue sky above. They shuddered and

quivered, limbs shrinking, heads crumpling inward, feathers sprouting out from their shoulder blades.

Within seconds, the sky was full of birds.

We girls ran into the streets, our bodies filling the spaces our husbands had occupied just moments before. We waded through piles of discarded clothing, shouting and screaming, tripping over ourselves and each other, none of us looking where we were putting our feet because we were all craning our necks at the sky.

My pigeon husband was one of the last to go. He waited until everyone else was safely in the air before taking off, clutching the two briefcases in his claws. I imagined them splitting open, twenty-four months' worth of bills spiraling onto the streets of the financial district, raining happiness, raining green.

If I'd been able to keep him for just one more year, he would have had three briefcases of cash. It would have been too many to carry, and he would have been forced to stay.

But the briefcases held, and eventually, my pigeon husband disappeared into the clouds.

There are no pigeons in New York anymore. Amber told me, two months after, that they had established a commune in Vermont and were warning other birds to stay away from us. She was dating someone now, a real human guy, and apparently he found the whole situation funny as hell.

We were catching up at the same brunch place we had brought our pigeon husbands before. No dates this time, human or pigeon. Just the two of us and overpriced waffles, which both of us ordered to keep up appearances. The gluten stuck in my throat.


"I got a job in Northampton," I told her. "I'm moving there next month."

"Won't you take me with you?" she joked, and we clinked orange-juice glasses.

"To new places," Amber said. "And to new people."

It was something I would learn to get used to, the profound sense of loss that accompanied each good-bye. I didn't want new people. I wanted to sit

on a patio with Amber, eating waffles dripping with syrupy fruit. But I was perpetually restless then, solitary and disaffected, and I couldn't find it in my heart to be satisfied with sweetness.

Ever since the pigeons left, I've felt watched by birds. This is a false belief, of course. The birds are all in Vermont. But often I can feel them following me with their beady eyes when I'm out on a walk—watching from nooks and crannies, from tree branches and hidden perches, from the shadows behind water fountains. Sometimes I look up, into the leafy ambiguity of the trees, and I watch them back. 



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Sam W. Pisciotta lives in Colorado surrounded by meadowlarks, blue jays, redtail hawks, and song sparrows. “I’ve always been fascinated by birds, and I often include them in my stories and artwork. Courageous and irrepressible—the little sparrow felt like the perfect window into this story.” Sam’s stories have appeared in Analog, Asimov’s, PodCastle, and other fine publications. This is his first story in F&SF. You can view his bird artwork and find out more about him at silo34.com.

Los Pajaritos

By Sam W. Pisciotta

The heart of a sparrow in flight. Eight hundred beats per minute. An explosion of feathers—coffee and caramel and dusty rose, like the Earth itself took wing to flutter and flash. I smiled when you called the sparrow your spirit animal. Such a fragile creature.

We were unable to hold on to the simplest things.

I struggle to recreate the mottled tans and browns of the wing pattern with enough variation to suggest authenticity. It takes patience to place synthetic feathers so they won't appear fixed by hand. The secret? To imply order in the midst of chaos.

The feathers adhere to a delicate skin of microfiber. Through trial and error, I discover the right material, a gauze once used to stabilize bone fractures. I find an overlooked roll inside the boarded-up medical clinic in the plaza del Recuerdo—the same clinic where a doctor once told us you needed further tests.

Now, years later, moving through that clinic's shuttered twilight, I find your memory nestled in shadow: Sitting on stiff chairs in the examination room, we waited while the seconds, thick with the dread of not knowing, puddled at our feet. The tears came later, after those further tests. You turned to hide the fear in your eyes, but your fingers gripped mine, and you held your breath so long I found my own lungs aching for air.

I remember how we once strolled along the arroyos, sharing ourselves with words that flocked between us, stories roosting with a certain restlessness, impatient for familiarity. Even then, I suspected I had found the person most important to my life.

As we walked, the last sparrows, unaware of their impending extinction, flitted among the opuntia, feasting on the ripe cactus fruit.

On those first walks, you told me stories of your childhood. Through the years, I would hear each tale, again and again, every time listening with interest. You would smile and touch my hand, grateful for my attentiveness.

Inside the forgotten clinic, I reach past your memory into a cabinet with broken glass. It's there I find the gauze, enough to cover our sparrow's head and body and wings with a single taut layer.

Two layers would be better. I worry our little bird may be too fragile for flight.

The skeletal structure requires more persistence. In the dusty library on avenida del Cielo, I discover anatomical illustrations. But needing more detail, I decide to visit the university where I once worked in the Mechanical Engineering Department—research and development, a little teaching. Across campus, you taught literature. We would meet in the middle to drink coffee and talk of a life that now feels far away.

I scour the specimen drawers at the university overrun by sage and scrub pine. A small sparrow, stuffed with sawdust, lies open-winged across the foam padding within the drawer. Next to it lies its skeleton, fixed together like a puzzle with numbered pieces. I load the printer in the Biology Sciences building with thermoplastic polymer and feed it the patterns for flight. Over the gas generator's grind, the printer whirs and clicks as it reconstructs the bird's fragile bones.

Our home once held a different machine, an instrument to filter the air that might sustain you. After you had stopped speaking, after you could no longer feed yourself, after our shared vows had become so much more than words, I sat at your bedside and fed your stories back to you. The persistent hum from that machine filled the pauses between my words, straining with the drone of inevitability.

By then the sparrows had disappeared.

The real dilemma in building our bird lies with flight. At first, I use clockwork to recreate wing motion; wheels, drive gears, springs, and casings are easy enough to find. But the gears can never overcome their own listlessness.

Toward the end, only words sustained you. Between two lips promised to the parched soil, you sucked water from a cloth and listened to me retell the

stories I had learned by heart: *Do you remember the river behind your grandmother's house? You spent one summer trying to throw salt onto the tails of sparrows. You may have smiled at the memory, or I may have imagined it. Your grandmother told you that if you placed salt on a bird's tail you could catch it. All summer you watched and pursued the sparrows flitting in the tall grass. And you fell in love with them—their movement, their curiosity, their lightness of being.*

Nanobot circuitry gives our sparrow the illusion of life. I begin with simple motions, the head's turn and tilt, legs bent to push and hop. I experiment and learn. With growing confidence, I program the wing's swimming motion, the kinetic chain transferring energy along linked joints.

At last, our little bird achieves flight. Here to there, like a child's balsa-wood glider, a flight both unsatisfactory and predictable. In order to truly mimic life, the nano code will need to move through undefined paths without crashing. In essence, the program matrix requires causal chains that generate their own outcomes. Code writing code.

There's a logic grounding this thing. But the parts, fitted together, create something new, something greater—a reminder there once lived a creature within this universe so light and spirited it existed between earth and sky.

Eventually, the machine sustaining your breath purred to a halt, but your stories continued to churn within me, tumbling and polishing away the rough edges of loss. I began building our sparrow on the day you died.

• • •

With our little bird now finished, I walk along the arroyo under an approaching storm. The air is always cold, and my hand trembles as it cups the bird resting in my jacket's pocket.

Wind stirs the earth as I nestle the sparrow between the cactus blades. I step back a few paces. Our bird appears authentic enough to fool the eye—to trick the heart. I wish you could see it.

It hops across the brown earth, moving among the dried grass. Its head tilts as if to listen. It twists and preens its feathers. This is not something I remember programming into its nanos, and the action steals my breath.

As I step closer for examination, our little bird squats, ready to spring into the air. I stop, afraid it might startle into flight. And then it does fly. A parabola of feathers, at once both rickety and self-determined. It settles on a walking stick cholla.

I chase after it, but the bird flits along the arroyo's edge, two short hops of flight. My mind races to follow; I'm losing this thing that took years to build. I scuttle in pursuit around the cacti, scratching and tearing my legs against their spines.

Mi corazón, we should not have had to say good-bye so soon.

Our sparrow hurtles into the air and flits across the arroyo. A shadowy blemish against the sky's dying fire. I gulp these last moments as it changes direction and flies toward a distant clump of mesquite, the perfume of cactus flowers rising on the wind, ancient soil resting on my tongue.

Programmed to imitate life, our sparrow has no choice but to leave. It lifts into the air, and my heart pounds. For a moment, it was here—and I was here. At this intersection of our existence, we came close enough to share a setting sun. It flies to meet the distant horizon, this thing made from love, this heart-sized bit of thread and plastic and metal singing in present tense, this thing that, even as I watch, wings into my past with a flutter that sounds a lot like the word good-bye.

Chet Weise's poems, stories, and essays have appeared in publications such as Copper Nickel, Peach Mag, and Poetry. A musician, too, he has recorded and toured worldwide with almost-famous groups The Quadrajets and Immortal Lee County Killers. Weise lives in Nashville, Tennessee, where he is the editor at Third Man Books. About the poem, Weise says, "It's always interesting when science fiction is on the cusp of becoming science fact, especially when thinking about originality and origination (and maybe a little about Hemmingway, too)."

Science Fiction Novel in Four to Seven Words

By Chet Weise

For Sale: baby A.I.

shoes, never worn. 



“It appears you’ve found a new particle.”

Brooke Brannon is a Pacific Northwesterner who lives in England with her partner Paul, writing speculative fiction and exploring fiber arts. She wrote this story on a trip to Miami with her mother, a lifelong quilter, who told her that some Guatemalan families hand down weaving and embroidery patterns from one generation to the next, connected by an endless line of stitches. Brooke's work can be found in Illustrated Worlds and Tales to Terrify.

Pluto and Tavis D Work the Door

By Brooke Brannon

Pluto and Tavis D are having a smoke at Sunny's on 11th Street and Collins Avenue when the auntie with the wrong face rocks up.

They'd spent a long Saturday night working the VIP door at the Apocalypso, separating the entitled drunks inside the VIP ropes from the entitled drunks outside it. The two men specialized in stopping problems before they started. Usually that meant a stern glare, but occasionally it meant clotheslining some pumped-up asshole in an Ed Hardy shirt who'd been refused entry but wouldn't let it go. And once in a blue moon, they got it wrong. That night, Pluto had misread Tavis D's signal and brought down a skinny little guy who was amped up on something, but who was, actually, a VIP. As they tried to revive him, Tavis D told Pluto, "Your problem is you don't communicate." It stung.

Pluto found himself brooding about it even after their shift ended at 5 A.M. Walking through the predawn darkness of Miami Beach, he asked Tavis D what he meant.

"You never say what you mean, man," Tavis D said. "You're like the Sphinx."

Pluto considers this as the morning unfolds. Everything is the same as it always is: They wrap up their shift and head to Sunny's for Cuban coffee and croissants, Tavis D running his mouth about some superstition, Pluto letting the words wash over him as he pretends not to watch Rexie McWilliams gossip with the counter girls.

They like Sunny's because it's low-key and local, the exact opposite of the Apocalypso. This time of day, Sunny only opens up the outside counter, catering to people either coming home from work or getting up for work. No tourists, no clubbers, no flocks of party girls staggering around like disheveled flamingos. Just neighborhood types. There isn't even much

traffic. The only noise is from the birds that cluster thick in the palm trees along Collins Avenue, making a racket like every day it's World War III.

In the middle of it all is Rexie, holding court like always. Rexie McWilliams will talk to anyone about anything, and he's never met a stranger. He's wearing a sequined T-shirt that's a little too tight for his belly and waving around a Marlboro Gold in a long white holder. Rexie stands five two on a good day and is broad as a house. He's got asthma, a lazy eye, and a hand with only two fingers. And as far as Pluto's concerned, when Rexie points his huge, goofy smile in his direction, the sun comes out. Not that Pluto would ever tell him so.

That's the way every morning goes, and that's the way Pluto likes it: sipping on his coffee while Rexie flirts with anything that moves, and Tavis D runs his mouth. They let the night roll off like fog off water.

But then the auntie shows up.

They hear her before they see her. Silence moves down Collins Avenue like a tank or a percussion wave, something you feel instead of hear. As the auntie approaches, even the birds go quiet. It's like she's in a bubble that sucks all the sound right out of the air.

She looks like a tourist who's up too early. She's a short, stout white lady hitching along in sandals that go *flap-flap-flap* against feet that are almost certainly thick and stumpy with cracked heels, not that Pluto can see them from across the street and down the block. She's wearing white shorts and carrying a big yellow market bag, the tourist version of the ones he and Tavis D used to weave when they were kids. On the front of it is a huge floppy straw flower. It's bright pink to match her shirt, which is long, loose, and covered with embroidery, almost like a huipil. The stitches are so thick it looks like there's more thread than shirt.

Pluto's mom makes a living doing handwork—weaving, embroidery, sewing, knitting, you name it—and Pluto takes an interest. In some families, stitchery designs get passed down like an inheritance, and if you've been raised to look closely, you can tell where someone's from. Take him and Tavis D. Their mothers are sisters who married two handsome men who only turned brutal after their sons were born. On Pluto's fourth birthday, his father—raging that his only son had yet to speak

his first word—broke Pluto's arm, then left the house in a fury so that he wouldn't have to face what he'd done. His mother splinted Pluto's arm and wrapped it with her wedding dress, the one she'd spent a year weaving, the most substantial piece of fabric she had. She took her child to her sister's house, where Tavis D's father threatened to send them right back. The sisters got him drunk and stole his car, and all four of them—Pluto, Tavis D, and their mothers—escaped and drove through the night and all the next day, eventually landing at a cousin's place in Miami. A cousin with a chop shop and an axe to grind about men who hurt their families.

Since then, no one ever spoke about the men they'd left behind. They simply moved on, living together as a family, finding work where they could, making cheap, cheesy guayaberas and huipiles for tourists, shirts so devoid of culture that they could be made by machine in an hour flat and sold wholesale by the hundreds. But when the sisters had time, when they weren't working twelve-hour days and doing their best to raise good men in a godless world, they worked together to develop their family's woven design into a set of motifs that was altogether new. The design was like a code, speaking to Pluto's pain and Tavis D's fear with its broken, jagged red dashes, describing their flight from their husbands with dark, hectic zigzags. And then the calm blue-green of Biscayne Bay, the bright hot pink of the bougainvillea in their new home, and the twin doves, queens of paradise, their mothers. Above it all, the double-headed eagle, past and future, joy and pain. Work and rest.

The design is on almost every piece of clothing that Pluto and Tavis D have, hand-stitched in barely contrasting thread on the hems of jeans, embroidered down the fronts of the guayaberas they wear for work, woven in bright white thread on their wedding shirts. Pluto wears those clothes like a badge of honor.

So, when the auntie comes trucking down the sidewalk, bringing that tide of silence with her, the first thing Pluto does is to look at her shirt to see where it's from. But he can't make out the pattern—not because he doesn't recognize it, but because it shifts with every step she takes. It shifts more than it should from a woman walking slowly along. His eyes slide off it, like he can't focus. Instead, he looks at her face, and then he can't look away. She has this stuck-on smile that's wrong somehow, and she's staring

at him. Her mouth is crooked; it goes up in a little wave and then down in a way it shouldn't. Her face is empty like a vacuum, and it is pulling him in.

Tavis D stops pacing. "Hey, Plu. That lady's shirt seem funny to you?"

"Don't look," Pluto says, and takes up a position beside Tavis D, feeling in his pockets for his knuckle-dusters and then at his neck for his St. Christopher medal.

"You think someone slipped us something?"

"Don't *look*." But it's too late. They're both stuck, and he knows it.

She stops at the corner, waiting for the light to turn green even though there are no cars anywhere. She doesn't move, not to adjust her shirt or the huge flower on her bag like some ladies do. Around her the block is the same as always: weathered pinkish-gray pavement dotted here and there with gum; the smooth, rounded overhang of the Tudor Hotel framed by palm trees. But everything looks a little drained, a little dimmer than it normally does. As though the silence also applies to color. And the less color there is around the woman, the more that beetroot-pink shirt of hers glows.

She stares at them, smiling.

It's menacing, is what it is. Not like the Apocalypso, either. Pluto and Tavis D are good at handling the door. Pluto earned his nickname by being flat-out huge, big as a planet. Tavis D, though smaller, doesn't have a fearful bone in his body. He'll throw down if throwing down is called for. But this is something else.

And just as Pluto is thinking he needs to take Rexie and Tavis D and get the fuck out of there, the auntie snaps her fingers.

Pluto blinks, his eyes suddenly dry. He knows something was bothering him, but he can't remember what.

Tavis D is pacing again, his hands scrabbling against his pockets like he's itching for the gun that isn't there. The one Pluto won't let him carry. "Those black birds, you see them? You see a black bird, somebody's gonna die. Won't be you necessarily, but somebody."

Pluto resettles himself, lights another cigarette. Positions himself so his back's to the wall.

There's an old woman across the street, waiting for the light.

She bothers him.

"You talking about those black birds again?" Rexie calls as he waves good-bye to the counter girls. He swans over, cigarette held high, like he's in a parade that no one else can see. "Birds gonna bird, *mi hijo*."

Pluto feels like he always feels when Rexie comes over—happy, a little fluttery, not quite sure where to put his hands—but then he feels a little eddy of cold air and realizes the woman from the corner is standing right next to him.

Pluto forces himself not to jerk away from her. Settles for just getting up out of his chair, slow, stretching like he's tired of sitting down. His shirt—short-sleeved, rough linen, the twin of Tavis D's, their mothers' embroidery running down the front and the sleeves—hitches up over his stomach. He lets it, not wanting to make any sudden moves.

Rexie doesn't seem to notice anything wrong. Instead, he does what he always does: takes his charm and aims it straight at the old woman, and before Pluto can do anything to stop him, Rexie says, "Auntie, your shirt is magic."

She aims her odd frozen smile at him, her eyes cataract blue.

Pluto eases in between her and Rexie, using his height and bulk to look menacing.

The auntie stares straight through him like she can still see Rexie. When she finally does look up at Pluto, she says, "No," and her voice sounds like shattering glass.

Rexie bats him out of the way, maybe to get a closer look at the woman's shirt. Before Pluto can stop him, he reaches out as if to touch the fabric, but at the last second his hand veers off. He looks down like he's surprised his hand isn't doing what he wants it to do.

Pluto gets in between them again. "*Mira*, this nice lady doesn't want you touching her," he says. He has always prided himself on his nice deep

voice, but right now it's as thin and sharp as yesterday's beer.

The auntie sits down. By the time Pluto realizes she's moved, she's already sitting in a seat behind him, so he has to move to see her.

She is still smiling, dead blue eyes peering out of a gray-white face.

And then she snaps her fingers.

Pluto forgets. They all forget.

Pluto sits down between Rexie and an old woman in a dark pink shirt. Without knowing why, he tries to make himself big, like a boulder or one of those portable bomb shelters you see on TV.

"I am telling you, something is *up* with those birds," Tavis D says. He is now pacing behind Pluto, as if ready to back him up. But why is Tavis D so tense? Why is *Pluto*?

Next to him, Tavis D sucks in his breath. The birds have started to gather. They're forming a rough half-moon shape around the intersection, facing them. Hundreds of them.

"Hey, will you look at that," Rexie says.

The woman in the shirt makes a sound somewhere between a laugh and a cough. Then she speaks, her voice sounding like something splintered, like shards of glass.

Pluto thinks she says, "My children," but he's not sure. He doesn't waste time wondering because now she's looking at Rexie, with her wrong smile and her wrong eyes. It feels like ice is sliding down his spine.

Rexie just shines his smile on the auntie. Pluto would like to kill him. Of course Rexie thinks he can charm his way out of it. He always does. For a guy who's so sharp socially, Rexie's worthless when it comes to stuff like this. Threatening situations. When some douchebag in a Tapout shirt is looking for a fight and Tavis D can't talk him down, that's when the shit hits the fan. You do your best to avoid fights, but sometimes you can't. Tell that to Rexie, though. He just sails right along, counting on the fact that he can charm the living shit out of everyone.

What really pisses Pluto off is that it works.

But then a large black bird flies onto Pluto's table out of nowhere, its wings raised, like it's going to attack. Pluto's up and off his chair so fast it tips back against the window with a crack. Rexie puts out a hand to him, looking concerned. Tavis D moves beside him so fast he blurs.

The auntie just smiles.

The bird seems to dance on the table for a few seconds, looking at her and shaking its wings. Then it bows to her.

"Nope," Tavis D says. "I'm done. I'm out." But he doesn't move.

Pluto finds that he can't move, either. He *wants* to, he's *about* to, but he just—can't. He finds himself praying for the first time since that long night when his arm hurt so bad it was like a rip right through his body, and they couldn't stop because the men—his father, his uncle—might catch them and make it worse.

Let us go, he thinks.

"No," the auntie says. Her voice sounds like a tear through space. Then she blinks, and it's like, for the briefest second, she turns into a reptile. Like she has two eyelids or something.

Something happens—a flash? a snap? something; time passes, Pluto is sure of it—and then he realizes that a strange old woman—he knows her, he *knows* her, he just can't place her—is staring hard at his shirt. Her smile is uneven. Wrong. And Rexie's right there.

Rexie, one hand on Pluto's arm, says, "Will you look at that sunrise?"

Pluto's entire body is a clenched fist. *Rexie, get out of here!*

The woman—why does he think of her as Auntie?—just stares at his shirt. She brings her hands together in front of her and starts working her gnarled old-lady fingers. They're so thick they look like roots. She draws them together slowly, like it hurts, and then parts them slowly. He starts to wonder how long she's been there, how long they've all been there.

She pulls the thinnest, longest, *blackest* set of knitting needles Pluto has ever seen out of her bag and starts knitting something that looks fine as lace. Filmy and blue-black, more like static than fabric, like the big shirts the party girls wear over their ripped-up Daisy Dukes. Her needles make

tiny *click click clicks* that raise the hairs on the back of Pluto's neck. It sounds like a massive lizard sneaking up behind you, like the last sound you're ever going to hear.

She doesn't even look at the work. She just keeps looking at Pluto.

Pluto tries to breathe in and finds he can only get the barest sip of air.

Meanwhile, Rexie prattles on. "What's that you're working on? It almost looks like Pluto's shirt."

"Mmm," the auntie says.

To Pluto, it's like hearing the purr of an apex predator: rusty, slow to start, and then with a depth that makes the hair stand up all over your body. "Let go," he says, not even sure why those are the words that come to mind. He barely manages to grind them out. His jaw feels like it's been wired shut. His lungs feel strapped to his bones.

"Gifts," she says, hissing the S.

Anything, he thinks, and realizes that the thought has freed him to move his forearm, barely enough to shake his watch at her. "Here. Take this," he says. "My wallet. Whatever you want."

She just shakes her head.

Tavis D has started to cry. He's not moving; tears stream down his face. Then a dark spot appears on the front of his cargo pants, below the crotch. Last time Pluto saw that, they were on the playground, eight years old, and this hulking fifth grader had pushed Tavis D off the monkey bars. It had knocked the breath out of him and scared him so bad he'd peed his pants. That was the day they learned how to fight.

"*Mira, mira*," Rexie says, concerned, and moves to go to Tavis D, but Pluto blocks him with the one arm he can move, blocks him like you'd side-arm your child when you're driving and you stop short.

The auntie says, "*Meee-ra*," trying to trill the R.

With that, the birds start to move, and to make odd screeching/scrabbling noises that he's never heard before.

"*Meee-ra meee-ra meee-ra*," the woman says, her smile like a knife.

“What do you want?” Pluto whispers.

“*This*,” she whispers, pointing with her chin at the thickly embroidered sleeves of Pluto’s shirt. She keeps knitting, the noise of the needles making his skin crawl.

“My shirt?” Pluto would give her just about anything, maybe even his own life. But his shirt? Why?

“Shirrrrt,” she says, like Pluto’s worst fears are being broadcast over some signal she’s receiving. She starts knitting again. Bits of blood are stuck underneath her thick gray nails.

And then he gets it. It’s not his shirt she wants—it’s his family’s design. The one that tells the story of his family’s escape from two of the worst men God ever made, the way they made a new family, a good one, out of two tough women and two scared little boys.

“Let her have it,” Tavis D says, his jaw clenched.

“What?” That design—that’s their legacy.

“She wants it, let her have it. It’s just a shirt.”

“No,” Pluto says.

The woman looks from the pattern up to Pluto’s neck, where he feels his St. Christopher medal start to sting. And then the skin on his arms erupts with hundreds of tiny red flowers, burst capillaries spreading over his forearms like hives, making him itch and itch.

“*Mi vida*, what in the world—” Rexie begins, but Pluto uses the last of his strength to shove Rexie behind him. This time Rexie stays put, which is good, because Pluto can no longer move that arm.

“*Veeee-da*,” the woman says, and her smile cracks open her face.

Beside him, Tavis D lets out a sob. “Let her have it,” he says, his mouth frozen tight, the words scraping out.

Pluto realizes what she’s trying to do. “Are you trying to say *mi vida*?”

She laughs at him. Laughs in his face.

He’s scared, but now he starts to get a little angry, too. Who is this woman to come up on his block with her birds and her silence and her

weird wrong face?

“No,” he says.

“No?” Something seems to light up in her. And those black needles keep clicking, the lace getting longer and longer.

When Pluto can wrench his eyes from her face—he can only move in little spurts, here and there, and only with great effort—it seems to him that the thing she is knitting is actually sucking up the light from the sky. What would normally be a glorious sunrise now looks like an old Polaroid from the 1970s, leached of color.

“Then your sight,” she says. The words sound like the screech of a bow against a violin string. “Your eyes. Every memory they have.”

The tops of his cheeks feel like they’re being drilled with tiny needles. The back of his neck, too, and the backs of his arms.

From behind him, Rexie gasps and shoves himself in front of Pluto. “You leave him alone!”

Finally you catch on, Pluto thinks, both relieved and appalled: relieved because if Rexie knows she’s dangerous, maybe he’ll get out of here, and appalled because he knows Rexie isn’t going anywhere. Knows it in the way he knows Rexie flirts with girls to tease him, make him wait so Rexie can make an entrance, waving his cigarette holder around like some actress from the 50s.

Pluto feels his chest constrict, and thinks, *Finally I catch on*.

Tavis D says, “Pluto, work the door,” but Pluto doesn’t know what that means.

The auntie looks at Tavis D and lets out a high, razor-sharp whistle that has all three men wrenching their arms to cover their ears. One of the birds flies straight at Tavis D, and then it’s like the bird collapses inward with a meaty cracking sound. It looks like a tin can being crushed.

Pluto closes his eyes. “You’re not taking my sight. It’s not mine to give away.” Pluto does not look at Rexie when he says it. “But you’re not hurting these two, either. Not if I can help it. So, what’s it gonna take?”

Rexie somehow finds the strength to grip Pluto's arm with his hand, the one with only two fingers.

"Your *shirt*," the auntie says.

Pluto feels like a butterfly pinned to a piece of cardboard.

Tavis D's sobs spurt into a whole higher gear. Rexie's two fingers are now digging into Pluto's arm. His breath is starting to sound high-pitched and wheezy, like he's trying to breathe through a straw.

The woman stops knitting and drags the needles down the left side of his shirt, black lace still attached. "It's all here," she says. "Your mother, your father. Your pain."

And that's when he realizes why her shirt looks so familiar, seems to suck at his attention even while it fights his focus: It pulses with his family's design, only it's not quite right. The colors are wrong, the motifs are out of order. It's like a bad copy. He doesn't know which is worse: her stealing it, or her fucking it up.

Pluto is done.

He doesn't care what she is. She doesn't get to take his family's design. She doesn't get to point with her chin. She doesn't get to make Tavis D cry or call Rexie *mi vida*. She hasn't earned any of that.

"No," he says.

It feels good to say it. It fills his lungs with good clean air, makes him aware of the blood that beats in his veins. He stands straighter. Beside him, he hears Tavis D start breathing more evenly, getting control of himself.

The auntie hisses, though she's still smiling. Her eyes don't have a single wrinkle around them, though the rest of her face is covered with them.

"You don't get to have it," Pluto says. "You don't get to have *me*."

Saying it breaks the hold on his arm, his back, his legs. Pluto is free.

He steps in front of Rexie and Tavis D and grabs the auntie's knitting needles, fast, right out of her long, knotty fingers. He's about to drive them through her neck when Tavis D says, "Don't!"

Everything stops. Even the birds. Pluto has the knitting needles at the base of the auntie's throat, and he's ready to put all his weight, all his speed, all his hatred, everything he has, behind his hands so he can drive them into her.

"Pluto," Rexie wheezes behind him.

Pluto can feel the heat from Rexie's head through his shirt about midway up his back. *If Rexie could move, he'd be holding on to me for dear life.*

He stands straighter, ready to do whatever he has to do to get this woman gone.

The auntie's eyes waver from his; her smile blinks off, just for a second. And then it's back.

"Give me the story and I'll go," she says.

"*Work the door,*" Tavis D says to him.

Work the door? Normally, when there's trouble, Tavis D starts talking to defuse the situation—making people laugh, giving them sass, whatever will distract them—while Pluto looms behind him, threatening violence. They've gotten so good, Pluto rarely needs to lay hands on anyone. Only now, Tavis D's mouth is practically wired shut, and clotheslining the auntie isn't going to help.

Tavis D stares at him, willing him to understand.

And then he gets it. When some jerk at the club tries to start something and you can't talk him down, you shut him down. You don't give him what he wants. You take it away from him and replace it with something he doesn't want. Like the shitty tourist version of a guayabera.

He stares the auntie right in the eye and says, "Maybe you can take my shirt, but you'll never get it right, 'cause you think it's about pain."

The auntie hisses and pushes back against the knitting needles, but he's ready for her and stands firm. He twists them slightly so they just indent the crease at her neck. It wouldn't take much to drive them right through, but that's not the point. Tavis D and Rexie are the point.

"Tavis D," he says, "there's something I need to tell you. I love you like a brother, and I would do anything for you."

As Pluto watches, one of the auntie's eyes squeezes into a little brown nut with a *pip*.

"I love you, Travis," Pluto says, using his cousin's real name for the first time ever. Tavis D sighs, loosens up his neck, and takes a step forward, so he, too, is standing in front of Rexie. He looks down at the auntie and smiles the smile Pluto has seen so often at the club—a *we're done with you* smile, hard and sharp and sure.

The auntie rocks back and her eye—now a nut—slips out of its socket and falls. One of the smaller birds darts forward to claim it, and then all the birds are clustered at the auntie's feet, fighting over it.

She hisses but the birds keep fighting.

Pluto lets the lace she was knitting slip off the needles and fall to the ground. It dissolves into a pinprick spray of black oil, splashing the birds and shimmering darkly in the light of the dawning sun.

The auntie looks hard at him with her other eye. Moves her fingers like she's about to snap them, but his hand whips out and tightens around her fingers before she can.

"Pluto," Rexie groans.

"Rexie," Pluto says, never letting his eyes slide from the auntie's face, "I have loved you since the minute I first laid eyes on you."

Rexie makes a sound like a sigh, then reaches around Pluto's waist with one hand to hold him tight.

"You are the sun in my sky," Pluto says, and feels Rexie's breathing start to smooth out. Something tight in him loosened.

The auntie's other eye turns into a nut and drops to the ground, creating another frenzy among the birds. Now they peck at the auntie's old gray feet, which seem to be sprouting roots. Her fingers and toes seem to be thrusting downward, blindly, toward the cracks in the pavement.

Pluto lets the knitting needles drop so he can take Rexie's ruined hand in his.

And then the auntie's smile cracks her face right in two.

At first, Pluto thinks they've won. *Love conquers all, bitch!* But then her mouth opens as if in a scream and he can see nothing but blackness and stars. No color, no sound, nothing but a giant howling void, ready to suck him and Rexie and Tavis D and everything else into it.

Pluto has never been a talker—in fact, he's said more this morning than he has all month. But if this is it, he figures he better make the most of it. So, he turns to Rexie and takes him in his arms and says, “The best part of my day is seeing you.”

Rexie beams at him. For Pluto, it's like looking into the sun.

“Me, too,” Rexie says.

Behind him, there is a high, howling shriek. All three of them turn just in time to see the auntie blow apart into a hundred tiny black birds, her yellow market bag dropping to the ground. Three perfect oranges spill out onto the pavement, and then she's gone.

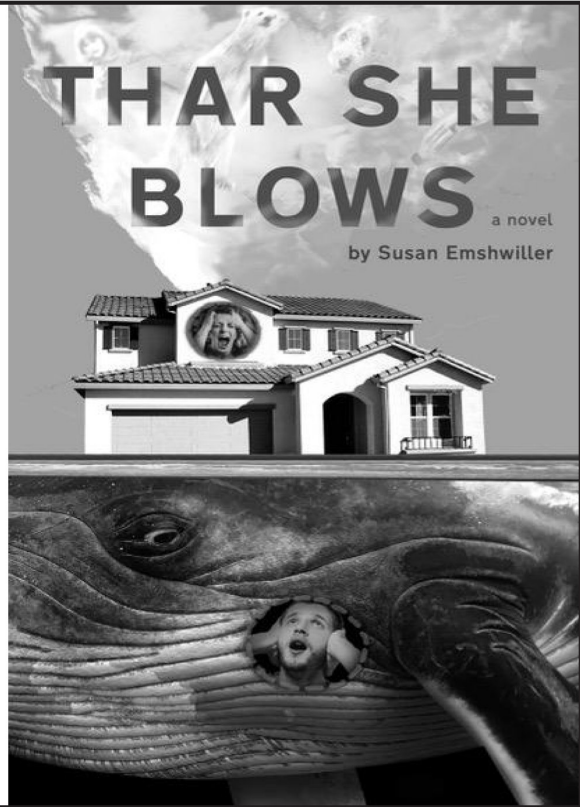
As Pluto holds Rexie close and brings Tavis D into the hug, color comes back into the world like a sigh, and whatever remained of the auntie blows into dust.

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Hilarious! A mother/son fiasco/
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Music is a window to alternate dimensions, including the one where Brian U. Garrison lives. Poetry is the radio signal he sends out into the universe. The instrument of his latest listening obsession is the hammer dulcimer as played by House of Waters. He connects to this reality in Portland, Oregon. This is his first appearance in F&SF. More online: bugthewriter.com.

The Music of Neptune

By Brian U. Garrison

The rasp of a coin
along a cymbal's edge.
The wah-wah woo-woo
of vibraphone tones.
The cutting vrrrrp
from stylophones,
theremins, and other
synthesizers.
None of the noises
from those spacey

futuristic musicians swirl
through the bright blues
of Neptune. No reverse-
echoing drums unbeaten
or trance-inducing
electrified plastic
tube resonance. It's not
the repetitive, intertwining
anti-melodic plodding
that will freeze your mind

but the bitter
methane crystals squalling
at Large Hadron Collider speeds.
The near-frictionless atmosphere
isn't a metaphor
for slick rhythms
but the reality

of great dark spots
slipping in and out
of consciousness

an unsteady vibrato
like Pluto's wonky orbit.
Any ears in range
of the rapturous winds
would shred
faster than nerves
would convey their signal.
These aren't the sounds
that move interplanetary travelers
looking to disconnect

so musicians escape
the foreign storms
and dredge up
psychotropic pulses
from our home planet
finding pleasing dissonance
just askew enough
to launch a measured
synesthetic
imaginary venture.

Lesser Realities

By Brian U. Garrison

The sun contains a single strand of plasma, bundled.
Mercury and Venus are unanswerable shadows.
Around our planet spins a silver moon uncratered by passing
asteroids.

Air never intermixes with fire: solid curls stack as a brazen, orange
spire.
The living ocean breathes a sigh of relief, releasing every mote of
surface tension.

Our brains untangle and scatter in a rainbow of mist.

Atoms weave between themselves unseamingly. ☞



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Jennifer Maloney (she/her) writes poetry and short fiction from her home in Rochester, New York. “Indigena” was born after reading the article referenced in the story’s epigraph, and wondering how the plant life of an alien world, in consideration of their “whole purpose,” might cope with an invasive species? Jennifer’s book, Evidence of Fire, Poems and Stories, is available here: claresongbirdspub.com/featured-authors/jennifer-maloney and at Amazon.

Indigena

By Jennifer Maloney

A seed's whole purpose in life is to sacrifice itself to grow one more time

— Jessika Greendeer, member of the Ho-Chunk Nation and manager of the farm and Indigenous seed bank for the nonprofit Dream of Wild Health, popsci.com article February 10, 2022, “Indigenous Farmers are ‘Rematriating’ Centuries-Old Seeds to Plant a Movement”

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It's possible we've been on-world a month now. It's hard to know because the days here aren't like the days at home. Time moves...*differently* than it did on Earth. Mostly faster, although there are moments that—hang?—and don't tick past, for what seems a long, long while. From unmanned drones sent ahead of landing, we had seen the way plants could grow here (some things sprouted, bloomed, and fruited all in one day!), but there was no way to understand, from that kind of observation, how time would *feel*. The dreaminess. The kind of *slipperiness*. The...*liquidity*—yes, that's it—the way it sloshes around. Or gets slower, thicker. Or simply evaporates.

What happened in the garden was straightforward enough. Twenty of us out there in the pale, pinkish light, the two suns above twisting about each other and slowly drifting toward a horizon hidden behind the towering greenwood surrounding our encampment. We were nearing the end of our shift, baskets overflowing with tomatoes, beans, and squash (all, yes, grown that day), when the cloud—the *veil*—drifted...or swam...or *murmured*, like a flock of starlings, out of the forest. It approached us, and instead of running or even trying to take cover, we just stood there, gazing at it, while time did its strange, funny dance with us.

Rose-gold in the sunshine, it moved toward us twisting and rippling, and once over our heads, paused, pulsating. Then it descended.

We were enveloped.

The moment...*hung*.

Eventually, someone surfaced from the dream. Herded the rest of us, drowsily, into the de-con stations, setting off an automatic alarm that brought upper-level personnel running. We tried to wash the shimmering dust from our skin, our hair, and it did seem to disappear. As we towed off, medical staff checked us over—no obvious injuries or other symptoms like rash or runny nose. Regardless, a fourteen-day quarantine was ordered. Today, I think, is day three.

It became apparent almost immediately that something was happening. Our bodies took on a subtle glow. Our skin shone, blemishes disappeared, we grew...fat. Healthy-looking. I felt strangely happy, full of energy. They played music from home for us, and we danced and laughed. It felt like a party. Then we slept.

Day two. Our bodies sleek, our skin smooth, plush. Everyone's hair was growing. A thick, pinkish blond.

But this morning, I awake uncomfortable. Overnight my body has stretched, my belly huge as a third-trimester pregnancy. Medics in hazmat suits are moving between beds, privacy screens drawn. Though the curtain is pulled around the cot nearest mine, I can hear moaning. I peer through a slit between panels.

Her name is Rose. A striking tattoo winds her left ankle: vibrant green tendrils, crimson flowers. I see her ankle, her foot—toes curl, then splay. The foot pedals up and down in agony, muscles rigid beneath her skin—her skin—

—is gray. Dark gray. Sere. Cracks open before my eyes, split the tattoo's vines, run from her soles up her calves. She screams and screams, but she doesn't bleed. Something else oozes from the wounds.

I look down at myself. See my skin graying, hardening, cracking—but I am not in pain. No need to scream. I understand.

We came here as seeds from a dying world, hoping to live. We came here as colonists, but we were outsmarted, or perhaps out-evolved. The planet has adopted—and adapted—*us*. We have been hybridized: not native, but at least not as entirely invasive.

From a great and painless height, I watch my belly open, almost unzip. A heap of blonde-pink silk bursts forth, a tiny breeze lifting strands into the air. They float like balloons. Attached to the bottom of each feather-like strand, like a skydiver to a parachute: a tiny sparkle, a dewdrop, the clear membrane of a sac. Within it, squirming, pulsing life. Embryonic—the black dot of an eye, the scrolling tail of spine—and green. Bright green. The new green of spring.

They lift from me and fill the space around me. Tens of thousands of them, created for and by this place, a new Indigena. They float higher and begin to disperse. I sense panic in the infirmary and I know they will not all make it out alive. But some will.

Some will.

Time slows, dissipates. Our whole purpose revealed, I do, too.

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Roger Dutcher lives in Wisconsin where he takes advantage of the proliferation of cheese and all that goes with such cheeses. "Canceled Sky" is his first appearance in F&SF. His poetry has also appeared in Asimov's, Amazing Stories and numerous other venues. Archibald MacLeish's "The End of the World" was one of the first poems the author read that made him realize SF poetry was an actual "thing."

The Canceled Sky

By Roger Dutcher

“...with vast wings across the canceled sky.”

—Archibald MacLeish “The End of the World”

It is sudden, as death often can be.
The sky split open,
the stars gone,
the day now blank,
and there are only
the vast wings of their ships
reaching across the canceled sky;
we are taken up,
an alien rapture,
as the Earth shatters
and the sun swoons,
we are all that remain.
Now we ride these wings
across a darkness
never known by humans
and wonder at the wings
that meet darkness
and use vacuum,
wings unlike any angel
we have conceived,
finding a new heaven
and a new earth,
ready to receive us
and envelop us
in the wings of the future. ✍



Christopher Crews is a writer and musician from San Diego, CA. He currently resides in Tuscaloosa, AL. This is his first published story. Says Crews, "I prefer the banalities of the future. Not so much what we will become, but what we will remain."

New Stars

By Christopher Crews

Keve awoke in the predawn dark. His canopy was in translucence, the sky a deep dewlap blue, and he watched as a satellite pinged low across the horizon. Beside him lay his son, Izak, and Keve reached out and placed a hand on the child's shoulder. The boy was wrapped in his mother's somnica, snug and warm and unstirring, and Keve smiled and lifted his hand and left Izak in his sleep a while longer.

Outside the pod the hills were resonating with a hush of collapsing canopies as travelers and spectators stretched their limbs and looked to the sky for any sign of the unknown. The blue joulees of Alvarante's northern slope rose amongst the tall grass and opened their petals to the early rays of light, and the wind passed through the valley in a slow ripple. Keve stood and pressed a finger to his canopy's center, and it opened around him like an unclenching fist, and he felt the cold breeze run down his spine. Izak muttered something beneath his breath and sat up in a panic.

"Did I miss it?" he said. "Have they passed through already?"

"No," Keve said, "of course not. This isn't something you can sleep through." He thought back to his first planet-side race, the rush of anticipation, the thrill of the unknown.

"They'll be here soon, though, right?" Izak asked.

"Yes, very soon," Keve said. He reached into his pack and drew a small cube from the inner pocket and handed it to Izak. "Why don't you pull up the holo? They should be close enough for a live feed now."

Izak crossed his legs and placed the cube in front of him and swiped his hand across its face. A blue light winked into existence and cast an image of a ship before Izak's half-sleeping gaze. Its hull was long and bulbous, and it hung motionless in the air above the cube like a prismatic ornament.

“The *Jasmine* is still in first,” Izak said as he widened the view of the holo. The ship compressed into a small pinhole and a second dot appeared at the far edge of the display. “But Papa’s in second! He passed the *Texok* while we were sleeping!”

Keve crouched down and stared into the holo. His gaze traced the paths of the ships as he scrolled through the time render. “It looks like the polar sling around Antares worked after all,” he said, smiling.

Izak leaned closer to the holo and pumped his fist twice in the air. “Come on, Papa!” he said. “Katazhi! Katazhi!”

Two baska drones buzzed overhead, faint as flies. Keve watched their passing and looked to his son and wondered how best to explain to him that his papa was no longer piloting the ship. Instead, an automated integration of his grandfather’s previous flight patterns now controlled the racecraft. The boy should understand, Keve thought. He had been at the funeral.

Keve stood and put his palm out as if to feel the pulse of the air. Far down the hillside children were racing their hover-kits and cheering as they ricocheted off boulders and high mounds of grass. Parents and elders mingled about and watched as their children fought for control of the miniature kits, laughing as each one toppled in disarray. Their faces were pale and ashen from a lifetime beneath their new stars.

A smell of kalamede rose up the hillside, familiar and honeyed, and it wafted on a gentle upspring. “Izak,” Keve began hesitantly, “do you remember your papa’s funeral?”

“I remember,” Izak said, still nose-deep in the holo.

“Then you know that your papa isn’t actually in the ship right now.”

“I know,” Izak said, swiping across the holo. “But his mind still is.”

Keve fell silent and filled his lungs and searched for the words. “In a way, yes,” he said. “But it’s more like an imprint of Papa, a memory of how he used to race. I’m not so sure I’d call it conscious anymore. It’s closer to autopilot now.”

“But that’s not what the programs say.”

“They prefer the illusions,” Keve said. “They like to maintain the heritage.”

“So, all the ships are autopilot now?”

“Yes. Your grandfather was the last.”

Izak looked up and studied the still-brightening sky. It seemed to hang lower than it had the previous day, and Keve followed his gaze through the silence. “Do you think humans will ever race again?” Izak asked finally, his voice soft and pleading.

“I don’t think so,” Keve said. “Unfortunately, this is just how things progress. We’re always improving upon ourselves, and rarely looking back.”

Izak nodded and lowered his head back toward the holo. He seemed dejected, faintly sullen, and Keve wished he hadn’t said anything at all.

“That’s not to say it can’t happen,” Keve added. “The improbable still always remains possible.” He rubbed Izak’s head and felt a bit of life rise back into him. The child needed affirmation, Keve reminded himself, not impedance—not yet, at least. “You’d be a great pilot, Izak. I’m certain of it,” he said.

Izak agreed, in his own silent way, and Keve left him to his quiet. There would be calmer times in which to speak.

For the morning’s stillness had begun its slow tremble through the waiting countless, and everything was awake and humming. Above the grandstands flags were raised and great banners unfurled from floating tethers. Colors lifted from the ground and scattered as the tone of a deep Biln sounded throughout the stadium.

“Come,” Keve said, “we should find our places.” He lowered a hand to Izak and Izak took hold and clutched the cube to his side.

“You can leave that here if you’d like,” Keve said, but Izak shook his head and tightened his grip and followed close beside his father.

When they reached their seats, Izak saw for the first time the true immensity of what was before them. The valley below stretched for what looked like eternity in all directions, and the grandstands that towered along

the far ridge were mere outlines on the horizon. A parade moved languid along the valley floor, dancing and singing and chanting as one, and the Biln player blew once more into his grand horn and Izak laughed as only a child could.

Keve bent down and lifted Izak onto his shoulders. Far to the east rose two massive columns of white steel, one upon each valley ridge, and Izak watched them ignite. They were thick and bright and as they lit, they sent beams of light vanishing high through the now-open sky, and the crowds cried a sudden and deafening cheer.

“Look!” Keve shouted, pointing to the west. “They’re coming.”

Izak snapped his gaze right and squinted through the noise and caught the sharp glare of two ships speeding into the atmosphere. As they broke the unseeable barrier, they sent great plumes of air around their hulls and fell heavy toward the surface. They were close, and Izak couldn’t tell one from the other, but he cheered and shouted as though he knew.

The ships banked suddenly, avoiding collision, and fell into a loose formation beside one another. They continued their plummet, their speeds indecipherable to all but Izak. Three hundred taks, his cube read, and he smiled and closed the holo as quickly as he had opened it. “Katazhi!” he screamed over the crowd. “Katazhi!” But his voice rose unheard amidst the chaos.

When the two ships leveled, they slowed gently and dropped into the long valley below, thrusting loud toward the grandstands in unison. The ground trembled, and everybody jumped, as though lifted from the roll of the tremor and the sheer lightness of joy. The ships edged, veered, rose, and splayed, and Keve watched the crowd, listening to his son upon his shoulders. He had seen it all before, the overtake maneuver, the near collision, the final ascent into the sky. An orchestrated re-creation, a dance of nostalgia. It was a famous race.

The ships passed below without Keve noticing, but Izak had every second absorbed, and his voice cracked mute as his grandfather’s ship slipped through the gate in first place. It rose fast into the sky like a weightless thing, light and shadowed and thin, and even Keve couldn’t help but smile as Izak kicked and squirmed above his head. Soon after, a line of ships

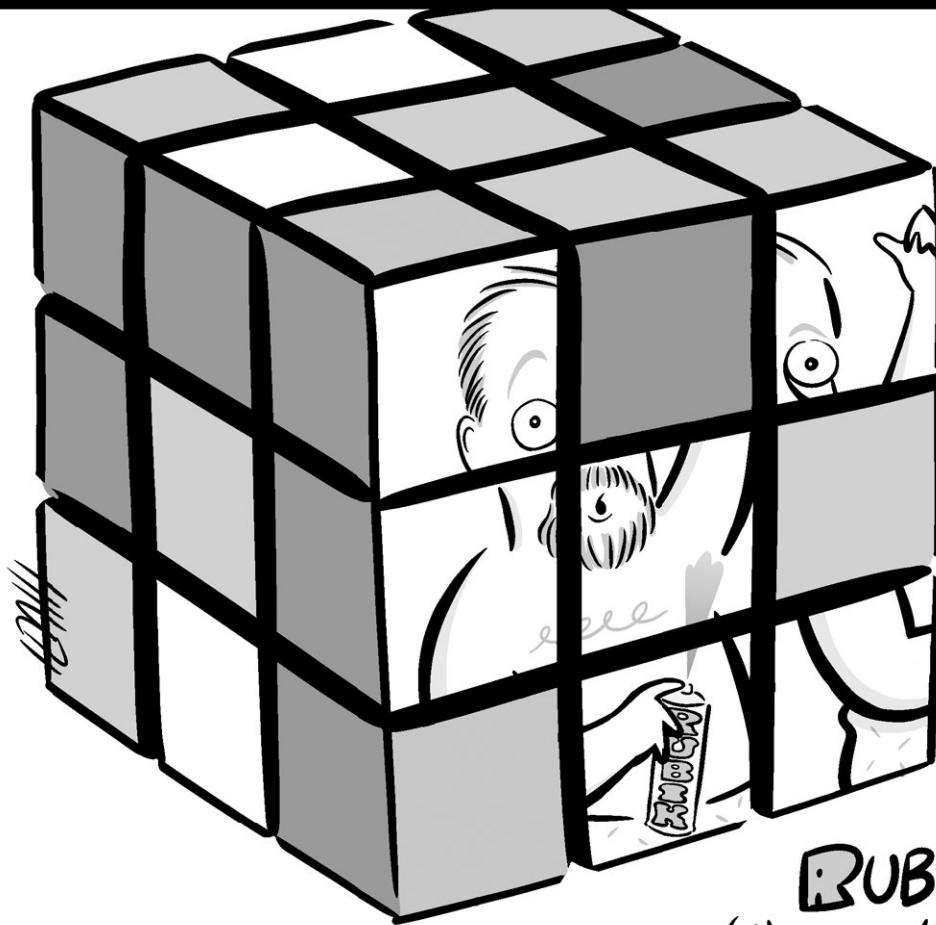
followed close behind, splitting the valley in a cold streak of gray. Seven ships passed through the gate in total, and each one lifted and bent its arc toward the heavens and trailed into nothingness.

To the east the sun still hung low, and Izak watched his ship climb high into the day, a tiny scratch in the sky. In it rode the future of the boy, and all that had come before. And, as before, he knew not one from the other.

“Katazhi!” he screamed. “Katazhi!”



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SCIENCE

Jerry Oltion

SPACE DUST, A RETROSPECTIVE

This magazine got its start in October of 1949, so we're now entering our 75th year of publication. With this issue we also have another important milestone to celebrate: This science column is now 65 years old.

Isaac Asimov wrote the first installment for our November 1958 issue, and continued for 398 more columns.* His wife, Janet Asimov, wrote a 400th based on conversations and letters with Isaac, then wrote a few of her own a couple years later. Greg Benford and Bruce Sterling alternated issues for a while until Benford began writing them all. Ben Bova had a guest column in 2001 ("Sex in Space"—a popular topic to be sure), then Paul Doherty and Pat Murphy started alternating with Benford until the Doherty-Murphy team (bylined as Murphy & Doherty in every other issue to make it clear they were equal contributors) took over completely in 2004. They continued writing it until Paul's death in 2017. I started writing the column in the March/April 2018 issue and have been doing it ever since. And yes, it's an honor to be in such exalted company.

[* Asimov wrote four columns for *F&SF*'s sister publication, *Venture*, in preceding months, but November 1958 marks the first of his science columns in *F&SF*.]

In the Beginning

Asimov's first column was called "Dust of Ages," and was about micrometeorites. That's the "space dust" that drifts about the solar system and falls to Earth in a continuous rain of tiny particles. Asimov's column was filled with facts and figures and a good deal of speculation, so I thought

it would be interesting to revisit the subject 65 years later and see what we've learned in the meantime.

In 1958 we had just launched Explorer 1, the U.S.'s first satellite, and one of its instruments was a micrometeorite detector. We had no idea how much debris there was in orbit, nor how fast it might be moving. That was a major concern for the safety of spacecraft and astronauts. Explorer 1 detected 145 impacts over the course of its mission, averaging 29 impacts per hour per square meter of exposed surface. That's quite a few impacts, which confirmed that space was full of dust. It had to be dust, because anything larger would have destroyed the spacecraft at that rate.

That small sample wasn't enough to calculate the infall rate over the entire Earth. To establish how much dust was in the air at any given time, a researcher named Hans Pettersson measured the amount of dust in the air atop two high mountains in Hawaii, reasoning that any dust in those remote locations would be global, not local. By measuring the cobalt content of the dust he collected (cobalt is common in meteorites, but not in terrestrial dirt), he estimated how much of it was meteoric in origin and came up with a figure of 28,600,000 tons of space dust in the atmosphere at any given time. He further reasoned that it took two years for the dust from the Krakatoa explosion to dissipate, so it wasn't unreasonable to assume that it took two years for space dust to settle as well. That meant 14,300,000 tons of the stuff fell to Earth every year.

Asimov took that figure and ran with it, calculating how much that would add to Earth's volume (very little) and how deep the dust would be if it simply accumulated over the course of the Earth's roughly 5 billion year age. He calculated 54 feet of dust, but rightfully pointed out that it wouldn't stay dust, but would in fact become the ground we walk on.

On the Moon

Asimov went on to speculate about dust on the Moon, and here's where the story becomes really interesting. The Moon should get as much dust infall per square meter as the Earth does, so according to Asimov's calculations, the Moon should have about 50 feet of dust on it, too, on average. And since the Moon has no atmosphere and only 1/6 of Earth's

gravity, that dust could stay fluffy and behave as a fluid when repeatedly struck and disturbed by more high-velocity dust particles. That means it could pool in low spots. That's exactly how it looks when you observe the Moon with a telescope, too. The great maria and many of the larger craters are flat-bottomed, as if filled with dust.

We hadn't landed on the Moon yet when Asimov wrote his column, so nobody knew if that was true or not, but it was a reasonable extrapolation. And *in that very same November 1958 issue of the magazine*, a story called "Critical Angle" by A. Bertram Chandler dealt with the lunar dust idea. In the story, the first spaceship to land on the Moon sinks right on through the dust and the astronauts have to dig themselves out.

And what's more, Arthur C. Clarke's classic novel *A Fall of Moondust*, in which a tourist boat sinks into one of the lunar dust seas, was published in 1961. That means he wrote it not long after Asimov's column came out in late 1958. That's unlikely to be a coincidence.

Bad Data

The only problem with all this is that the amount of micrometeorite dust was grossly overestimated. Most of what Pettersson measured was Earthly dust from deserts and human activity and forest fires, etc. The actual amount of space dust that falls to Earth annually is more like 20,000-40,000 tons, essentially 1/500th of Pettersson's figure. So the accumulation on the Moon would be about an inch, which squares with reality.

That doesn't keep creation "scientists" from using the old data, though. On the Internet you can still find the "moon dust" proof that the Moon isn't billions of years old, and they still cite Pettersson's figure as fact, thus proving that once bad data enters the system you can never get it out, in part because there will always be people with an agenda that the bad data supports, and they're not above using it.

Good Data

We've accumulated a great deal of good data, though. In the 1980s we launched the Long Duration Exposure Facility, a bus-sized satellite designed to orbit the Earth for a year and test what happened to various materials in space. Technical problems left the satellite in orbit for almost six years, which gave it a lot of time to measure micrometeor impacts. One of the things it discovered is that there are very few particles below 10 micrometers in size. Apparently the solar wind blows particles that small out of the solar system. (A human hair is about 50 micrometers wide, so that gives you an idea of how small we're talking.)

Other space probes have measured the extent of the dust cloud that fills the inner solar system. It reaches out past Mars to a point 2.06 AU (192 million miles) from the Sun, which happens to be the point where the particles' orbit would lock into a 4:1 orbital resonance with Jupiter. So Jupiter essentially keeps the dust bottled up in the inner solar system.

We've also learned that most (up to 90%) of micrometeoroids (which is what we call micrometeorites when they're still in space) are in sporadic orbits, meaning they aren't associated with any particular parent body. At least not anymore. Recent data suggests that a lot of the dust comes from Mars, but if so it's been spread out enough to pretty much permeate the inner solar system. Other studies show that most micrometeoroids come from comets and a small percentage from asteroids, plus some of it might be interstellar, so there's still some debate on their origins.

We've learned that dust particles strike at speeds of 2-12 miles per second, which means even a very small particle packs considerable kinetic energy.

Whipple Shields

So if satellites (and space stations) get hit by micrometeoroids all the time, and some of those particles are big enough to cause damage, how do we keep them from destroying our spacecraft? We use an ingenious device called the Whipple shield, invented in the 1940s (before we even knew how many impacts to expect) by the astronomer Fred Whipple.

The Whipple shield is a surprisingly lightweight gadget. You'd expect thick, heavy barriers to protect from hypervelocity impacts, but Whipple realized that impact with *anything* moving that fast would vaporize the particle. So he proposed using a thin layer of foil spaced a few inches away from the spacecraft's main body. When a piece of space dust strikes the foil, it vaporizes and spreads out, so there's no particle left to damage the inner wall. The gap inbetween can be filled with foam to increase the protection, or second or third layers can be added as well.

The James Webb Space Telescope's heat shield, five layers of aluminum-coated Kapton foil that keep the heat of the Sun from affecting the telescope's infrared sensors, also functions as a Whipple shield. Alas, that only protects the telescope from particles coming at it from the sunward direction. Not long after its launch, the JWST's primary mirror was struck by an especially large meteoroid that damaged one of its mirror segments badly enough to distort its shape. The telescope is still functioning within its design parameters, but that surprisingly early and large impact has made the scope's operators decide not to aim the scope into the path of oncoming particles unless an observation merits the additional risk.

Observing Space Dust

You can see space dust for yourself. This time of year, look east an hour or two before sunrise and if you're in a rural enough area to have very little light pollution in that direction you'll see a narrow triangle of light rising up at an angle into the sky. It reaches quite a ways, sometimes nearly to the zenith (the point overhead). That triangle of light is the dust that fills the inner solar system, in orbit around the Sun, lit up by sunlight. It's called the Zodiacal Light.

In the Spring, you can see the zodiacal light in the west after sunset. You can often see it at other times of year, too, but autumn in the east and spring in the west are your best times because that's when the plane of the ecliptic—the flat disk of the solar system—is angled highest in the sky. That means the zodiacal light will be reaching up higher than at other times of year.

An interesting side-note for music fans: Queen guitarist Brian May was working on an astrophysics degree when the band suddenly became famous

and he embarked on a career as a musician instead. Thirty years later, he finished his PhD with a dissertation on the radial velocities of the particles that make up the zodiacal light. In essence, he confirmed that they orbit the Sun and not the Earth or any of the other planets.

Collecting Space Dust

Not only can you observe space dust from afar, but you can also collect micrometeorite particles. They're surprisingly ubiquitous. There are probably several dozen of them on your roof right now. They filter down out of the air all the time, drop in with rain and snow, and accumulate in low spots. If you've got a flat roof, check the puddles for little specks of grit. People with angled roofs can often find them in their rain gutters.

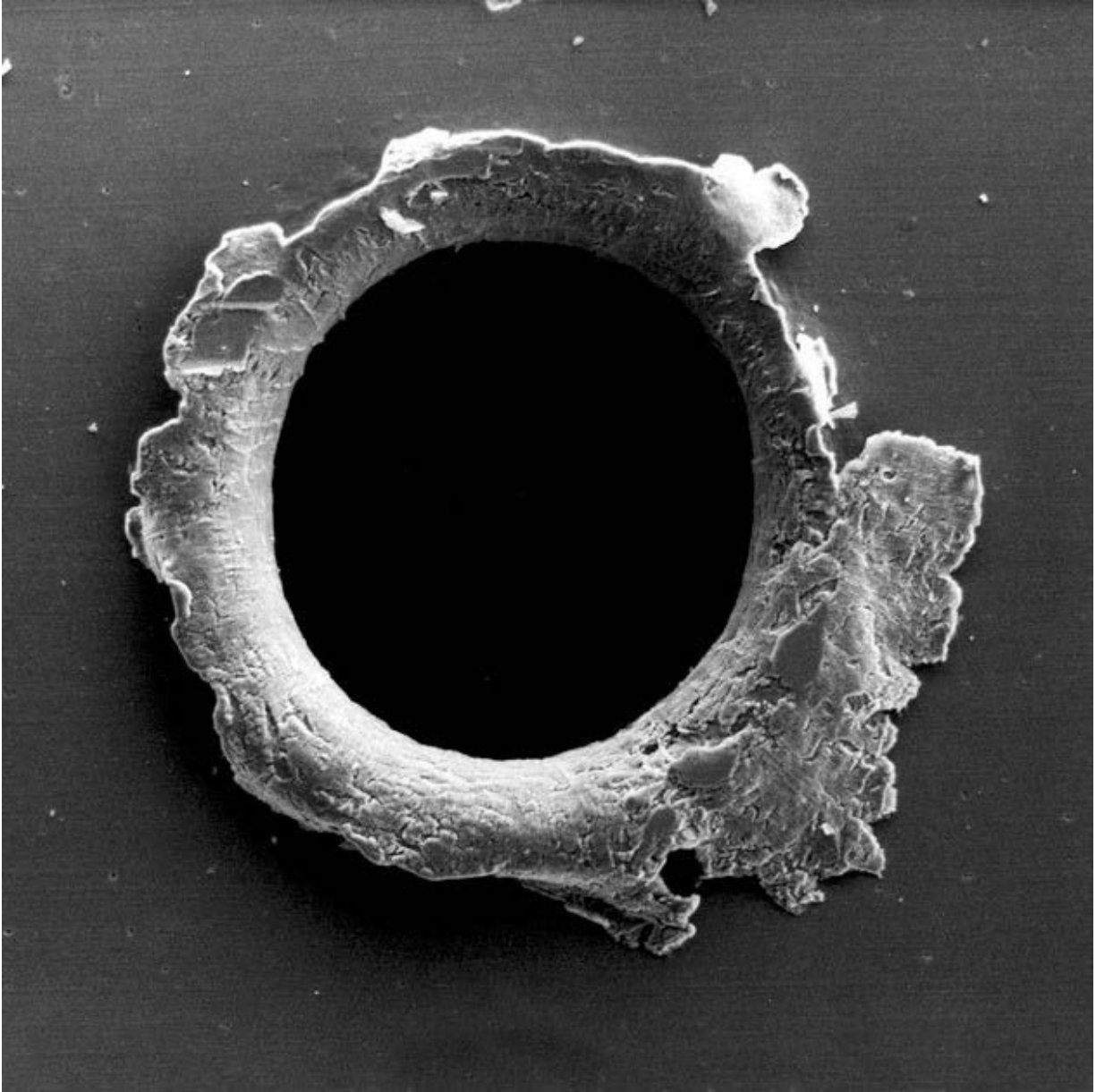
One of the simplest methods to find them is to drag a magnet through the puddle or along the gutter. About 6% of meteorites are made of a nickel-iron alloy, and will stick to a magnet. That doesn't mean that everything in your gutter that sticks to a magnet will be a micrometeorite, though. Urban pollution is full of metal particles, ranging from automobile exhaust products to factory smoke condensate to metal shavings from simple friction. So you have to examine each of your suspected meteorite particles under a microscope and look for other signs that will help confirm their extraterrestrial origin. Norwegian jazz musician and micrometeorite hunter Jon Larsen has created an internet site called "Project Stardust" to help people separate the space dust from the chaff.

Now

So here we are 65 years after Isaac Asimov wrote his debut science column, and space dust is still a big deal. We've learned a lot in the intervening time, but we still don't know everything there is to know about it. We don't know where it all comes from and we still don't know precisely how much of it comes to Earth every year. We misjudged the danger it presented to the James Webb Space Telescope, and we still don't really know how much danger it will present to astronauts venturing beyond Earth's orbit.

And more to the point, we don't know what else we don't know. This is the nature of scientific inquiry. Everything is subject to revision when more data comes along. But I think the comparison between Asimov's first column and our current understanding provides a wonderful testament to the robustness of scientific inquiry. When we put our minds to it, and our instruments and our calculations, we learn things about how the universe works.

And that, more than anything else, was Asimov's point in his columns, and my point in mine.



A micrometeor impact on the Solar Max satellite.



BY THE NUMBERS 9

SPEAKING IN TONGUES

Arley Sorg

America does not own science fiction.

That is to say, speculative fiction is a global phenomenon. It has been for a long time. I was reminded of this when I randomly picked up the June 1987 issue of *Locus Magazine*, which has the Hugo nominations and Nebula Award winners, but also has extensive articles on sf in Japan and the Soviet Union and even Yugoslavian sff awards; plus listings of books and magazines from Argentina, Finland, France, Germany, Greece, and Poland. [1] The June 1988 *Locus* adds a section on “Sf in China,” including announcing a fiction contest (for the second year in a row) for “Chinese or overseas Chinese all over the world” for stories up to 10K words.

And yet—then, as now—things in genre in the U.S., even things with the word “World” involved, often feel distinctly, almost exclusively “American,” with only occasional exceptions. Like the *World Fantasy Awards*, and the Hugo Awards—you know, given by *Worldcon*—both of these awards only rarely dappled with names of writers from across the globe, particularly in major categories.

Over the past few years I’ve interviewed a number of folks who work in translation, as well as authors whose work has been translated, plus a slew of authors who come from all over the world. At some point I started wondering: What is the state of global fiction in short fiction venues in the U.S.? As co-Editors-in-Chief at *Fantasy Magazine*, Christie Yant and I often celebrated international voices. But what does the rest of the field look like? As readers in the U.S., are we getting a lovely dose of work by authors in other countries? Do genre magazines really publish global perspectives; are some publishing far more than others? Are authors from certain places more heavily featured?

Do U.S. magazines showcase fiction by non-U.S. authors?

I had my thoughts, my assumptions, my suspicions. If you've read this column before, you know what came next: I had to take a closer look and find out.

So! This is my "at a glance" [2]—I picked six magazines (fairly arbitrarily; there are lots of great mags out there) and dug through their tables of contents. I looked for original fiction [3] published in 2022 by authors who are not "U.S.ian," including both works published in English and translated work. Here's what I found:

These numbers wiggle a bit. There's a fair amount of head scratching on my part, and, again, arbitrary decisions. Identity isn't always neat or easily contained by overly simplistic terms. I was born in California, but my first four years of school were in England (I had a fantastic British accent!). I never considered myself British, and would not have been able to "represent" anything but a U.S. perspective, albeit different from someone who had never lived abroad. My second four years of school were in Hawai'i, but I didn't call myself "Hawai'ian"—then seven years in Colorado, the latter part of which I considered myself "Coloradan." Now, I've lived in California for a long time, so yeah, I'm "Californian," especially since I was born here anyways—but perhaps not "Californian" in the way of folks who've been here all their lives. Or...is there really much difference? Can't "Californian" comprise a variety of folks?

"American" (properly: U.S.ian) should be understood to comprise a massive diversity, from the folks who were here in the first place, to the colonizers, and the enslaved and otherwise forced to be here, plus the multiple layers and waves of immigrants from nearly any country you can think of, and then everyone's children/descendants. Add in the more recent people who've just converted, the first gens, plus the folks who came over as kids. Then again, a lot of individuals who might technically be called "American" feel themselves to be more than just this, especially if they have only recently come here, or if they have strong ties to another culture. I am less interested in technicalities or legalities than I am in honoring how people see themselves.

Also, where in a chart do I put someone like Rich Larson, [4] "born in Galmi, Niger, has lived in Spain and Czech Republic, and currently writes

from Montreal, Canada”—and Ray Nayler, who is definitely “American,” but who has spent massive chunks of his life (including writing time) very much *not* in the U.S.? [5]

The idea is to get some sense of the state of short fiction published in U.S. magazines but written by non-U.S. folks, so my numbers don’t include anyone who describes themselves as “American” in any of the resources I used, including Americans living abroad. I tried to keep my assumptions about folks in check as much as possible, and utilized the descriptions the authors themselves gave, wherever they gave them. A lot of folks don’t describe themselves with any specific national/regional associations, so they were not included, since I couldn’t say with any certainty that they represented this type of international perspective; also, folks stating they “live” somewhere were usually not included, because “living” somewhere could be short-term or otherwise temporary; they could be from the U.S. and just living for a spell in another country.

In other words, the numbers signify only the folks that I’m fairly certain represent international (non-U.S.) voices and perspectives, exclusively based on publicly available information.

If they said “Spanish writer” then I slotted them in my spreadsheet as *Spanish*, regardless of where they live now. “Spanish-American” would be “American;” same with “born in Spain but moved to the U.S. at age 7.” But “Spanish writer living in the U.S.” would be *Spanish*. Some of the specifics of where I placed folks are probably arguable, but I honored the statements authors made whenever I found specific statements. [6]

A number of authors made multiple appearances, such as Lavie Tidhar [7] appearing in all three online mags, Michèle Laframboise appearing three times in *Asimov’s* and once in *Analog*, Octavia Cade with two appearances in *Clarkesworld*, one in *Asimov’s*, and one in *F&SF*, among other folks. Canada was heavily represented, compared to other countries, with Canadians in all six magazines—including Fonda Lee in *Uncanny* and M.L. Clark in both *Clarkesworld* and *F&SF*. England was also heavily represented, and these numbers didn’t include Irish author Finbarr O’Reilly or Scotland’s David Goodman, both in *Clarkesworld*, nor Alastair Reynolds (who is from Wales) and his *Asimov’s* piece. Greece was represented by four authors with six stories: EA Mylonas in *Clarkesworld*, Natalia

Theodoridou (twice) and Eugenia Tryantafallou in *Uncanny*, and Phoenix Alexander (twice) in *F&SF*. New Zealand had, besides Octavia Cade, Taemumu Richardson in *F&SF*, Sean Monaghan in both *Analog* and *Asimov's*, plus Melanie Harding-Shaw and P.K. Torrens [8] in *Analog*. Nigeria had the strongest presence for African countries, including Oyedotun Damilola Muees in *Clarkesworld*, Oghenechovwe Donald Ekpeki in *Asimov's*, and Innocent Chizaram Ilo plus Tobi Ogundiran in *F&SF*; Zimbabwean author Yvette Lisa Ndlovu had a story in *F&SF*, Liberian author Kedrick Brown (“now residing in Cambridge, MA”) had a story in *Analog*, and Vivian Shaw (“born in Kenya and has lived in Cardiff, Oxford, and Baltimore”) with a piece in *Uncanny*. India had five authors: Vandana Singh and Amal Singh in *Clarkesworld*, Samit Basu in *Apex*, Rati Mehrotra in *Uncanny*, and Shreya Ila Anasuya in *F&SF*. Singapore had Eliane Boey in *Clarkesworld*, plus Wen-Yi Lee and Anya Ow in *Uncanny*. Folks from other places included Haralambi Markov (Bulgaria) in *Uncanny*, Adriana C. Grigore (Romania) in *F&SF* and *Clarkesworld*, and Anna Martino plus Renan Bernardo in *Clarkesworld* and *Apex* respectively, holding it down for Brazil.

Besides the chunk of translated work from China in *Clarkesworld*, they also ran translations of work by Swedish author Oskar Källner and Alan Kubatiev of Kyrgyzstan, translations by Gordon Jones and Alex Shvartsman. *Apex* featured translations of work by Yilun Fan (Hong Kong—translated by S. Qiouyi Lu), Christina Jurado (Spain—translated by Monica Louzon), and Clelia Farris (Italy—translated by Rachel Cordasco). Yefim Zozulya (Russia) was translated in *F&SF*, K.A. Teryna (originally from the Ukraine and more recently living in Russia) was translated in *Asimov's*, both by Shvartsman; and Andrea Chapela (Mexico) was translated in *Uncanny* by Emma Törzs.

My conclusions: By the numbers, *Clarkesworld* is showcasing the most non-U.S. authors, but a large portion of these are all from one country. Subtracting Chinese authors, they are still heavy hitters, but by percentage the numbers look different. And yet, interestingly, they still have a greater range of global locales they are drawing from. *Analog* has a high ratio, with most of these authors from the UK and Canada.

Overall, looking at this sample set, these U.S. markets collectively do publish a fair amount of fiction by folks from around the globe. Some

places are far more represented than others. One explanation might be that stories from Anglophone countries are more...“accessible” to some of these editors. Personally, I can’t help but think of anthologies like *Africa Risen* (Tordotcom), *Disruption: New Short Fiction from Africa* (Catalyst Press & Short Story Day Africa), *Unlimited Futures* (Fremantle in association with Djed), and many others I’ve seen, books demonstrating that amazing short fiction is being created all over the world. In other words, there exists plenty of worthy work from other places. At the same time, having run a magazine for the past few years, I can also attest to the wealth of wonderful stories that come from the U.S.

As a final note, I want to mention *Samovar* (samovar.strangehorizons.com) “a quarterly magazine of and about translated speculative fiction” and *khôréô* (khoreomag.com), “a quarterly magazine of speculative fiction and migration,” two mags which focus more specifically on international voices and perspectives.

Delve into the mags I’ve discussed. Draw your own conclusions. Dig into some other venues too, see how they stack up. Please do read more stories! Ask questions, but don’t just jump to conclusions: Tally things up and look at the numbers. Have fun with it!

2022 “At a glance” with six magazines

	Total Stories	Non-U.S. Authors	Translated Stories	Biggest Demographics	Countries Repped
Asimov's	117	10	1	England: 2 NZ: 2	8
F&SF	79	21	1	Canada: 4 England: 4	13
Analog	73	23	0	England: 8 Canada: 5	10
Clarkesworld	86	30	11	China: 9 Canada: 3	19
Uncanny	43	12	1	Greek: 2 Singapore: 2	10
Apex	40	11	3	Canada: 3 (Lavie Tidhar: twice)*	9

Notes—

* Lavie is another one of those “very international” folks—per my interview with him at *Clarkesworld*: “Raised on a kibbutz in Israel, Lavie Tidhar began his world travels at fifteen, living in South Africa, the UK, Laos, and Vanuatu.” It’s harder for me to specify that he “represents” a particular place, and I didn’t find a statement by him specifying identity (such as “Israeli author in the UK” or “British-Israeli” or even “British”—though there are statements by *others*....) so I’ve left this one simply as “Lavie.” (He may have made a statement somewhere—I just didn’t see it.)

1. Such as Argentinian mag *Unicornio: Literatura Fantástica* #7

2. “At a glance” means 35 to 40 hours of digging up and managing information...this report is far from perfect! I definitely welcome readers to take a closer look at venues for themselves. And if anyone (probably a small group?) is willing to put more time and care into this type of project, I’d be genuinely interested in reading it.

3. Well...except that most if not all the translated fiction is reprinted, having appeared previously in its country/language of origin. But I believe these are the first instances of English-language publication.

4. From the bio on his website, although he has moved around and hung out in more places than just these, I believe.

5. See his *Clarkesworld* or *Locus* interviews for more on this. I decided that Rich brings a “Non-U.S.” perspective, but wasn’t sure what country (if any) he might “represent”; I decided that Ray is, after all, American, so I dropped him from the chart.

6. It’s very possible that I’ve made a mistake or two, and/or that I missed someone. I apologize for any errors. The information presented here should be taken in the spirit of “as far as I can tell” and “based on what I saw” while the general numbers for international voices should be read as “at least this many.” I sincerely apologize to anyone who may be erased or misrepresented.

7. Definitely another author who defies easy categorization in terms of “representing a country,” but definitely someone who can be said to be an international voice/non-U.S. perspective. Per the bio in his *Locus* interview: born and raised on a kibbutz in Israel, traveled since he was a teenager, living in South Africa, the UK, Laos, and the small island-nation of Vanuatu.

8. Torrens was in Yugoslavia during the civil war in the ‘90s but seems to have been in NZ for a while now.

For this project, I used bios, Google searches, Wikipedia, ISFDB (isfdb.org), SFE (sf-encyclopedia.com), social media, and a few other resources along the way, including interviews.



The lost Bruckheimer classic! Starring Bruce Willis as "John" Theseus!

Kedrick Brown, now residing in Cambridge, MA, is a trader and inventor who believes in the power of stories to inspire amazing forms of human cooperation. He has fond memories of watching Star Trek in Liberia growing up, which later helped inspire him to major in physics. Kedrick debuted in science fiction with the story "The Actor," winner of the inaugural Analog Award for Emerging Black Voices. His first F&SF story, "High Tide at the Olduvai Gorge," explores the human impact of structural inequality.

High Tide at the Olduvai Gorge

By Kedrick Gorge

Ayo Ogusi watched in stunned silence as the TV announcer interrupted his coverage of the 100-meter finals and repeated all six numbers on the lottery card in Ayo's hand. Although the coming jump in his bank account balance would easily make him the richest local on Earth, the good news filled him with surprising sadness. Rather than jumping for joy, he found himself sobbing on his couch at the prospect of finally being deemed "financially respectable," and so he called no one to share his good fortune.

Before the Elucidans' homecoming, Ayo had been a Rhodes Scholar and U.S. Olympic athlete, terms that few locals still appreciated. He remembered feeling cautious optimism when the conquerors announced new laws that would achieve true equality among all human beings. By the letter of these laws, all respectable humans from both Earth and Elucida were fully entitled to compete in track competitions. But the high-net-worth levels required to be deemed "respectable" in Elucidan law, combined with the fact that no locals had the Elucidan connections to make good money, ended up meaning that no locals got to run.

As each seat in a track stadium also cost about a typical local's yearly salary, the only locals lucky enough to be present at the finals on Ayo's TV were vendors and janitors like his good friend and former Olympic teammate Ingmar Johansson. Ayo had tried his best to get a janitorial job on the day of the big event, but the job-allocation algorithm had refused him, leaving him stuck watching the races from home.

...

As the TV announcer resumed coverage of the meet, Ayo brusquely wiped his face and sat up, recalling the odd series of events that had led to his lottery win. In early May 2087, about a month before the meet, a group

of highly respectable Elucidans had announced with great fanfare that they would fund some opportunities for locals to compete in track meets. They were convinced that the world was overlooking a lot of talent, and so to prove this, they organized a lottery for the residents of the Beverly Hills arcology, notorious for being North America's poorest. This angered many Elucidans, who warned them of the dangers of helping locals gain unearned respectability, but the group forged ahead. Ayo was handed his lottery ticket one evening by one of their representatives as he arrived home from work.

Well, I can definitely use more money, Ayo reasoned to himself. His mood improved further as he realized, Maybe I can even lend Ingmar some of it to help him enter the next meet. He's been hoping for another medal chance, and only account balances matter for qualification—nothing actually needs to be spent.

By now, the many Elucidan sprinters on the wide track were jumping up and down by their starting blocks to warm up. Although their complexions and facial features varied so widely that they resembled locals from all corners of the Earth, Ayo had been amazed to find that in Elucidan culture these types of features were about as socially relevant as eye color. Elucidans spoke and practiced true equality among themselves.

Elucidans did make a *huge* fuss, however, about the warm, halo-like glow of their skin. This "aura," as locals called it, was a form of bioluminescence present in both visible and near-infrared wavelengths of light, the result of their ancestors' prolonged adaptation to a subtly different biosphere and dramatically different sun. Elucidans thus literally glowed compared to locals, in both daylight and darkness. Unfortunately, as their religious customs also linked the presence of an aura to the presence of divine light in an individual, many of them tended to treat locals with a kind of polite caution, making it difficult to build trust.

• • •

The sprinters paused their warm-up routines and stood at attention as the loudspeaker boomed the "Song of the Ancients" to the standing crowd. Obi Spludi, who bore a passing resemblance to Ayo's first cousin Tunde, was easily the most famous of the group.

The anthem spoke with haunting reverence of the great ancestors' passage from Earth to the exoplanet Elucida through the "Gate of Heaven." As every Elucidan student learned, this naturally occurring wormhole linking the two planets remained submicroscopic and impassable nearly all of the time. However, about once every fifty thousand Earth years, its spherical entrance swelled to a diameter of about five miles in a high-tide-like event. The resulting space bridge linked large regions of the two planets' surfaces for about half a year before the wormhole collapsed to negligible size again for another fifty thousand years.

The periodic opening of this gate in Tanzania's Olduvai Gorge had enabled the biospheres of Earth and Elucida to interact numerous times throughout Earth's history, making Elucida habitable for the hapless humans who had wandered onto its surface in the distant past and then realized they couldn't return home. The human culture they created had thus developed independently of Earth's across a 600 trillion-mile gulf of space, over tens of thousands of years.

Elucidan technology quickly outpaced that of their Earthbound cousins due to stark hardships that forced them to develop more advanced forms of cooperation and carefully nurture their planet's biosphere to survive. By the time ancient locals were painting the Lascaux caves, their Elucidan cousins had already developed nanocomputing substrates powered by photosynthesis. By the time locals were building their first cities, Elucidans had perfected transfers of antimatter between locations near their planet's surface using small wormholes, enabling them to surgically blast for minerals with minimal environmental damage. They used this mastery of quantum gravity soon after to study the history and behavior of the Gate of Heaven in painstaking detail.

And so, it was entirely logical that when the Gate of Heaven reopened in the summer of 2077, the Elucidans had been preparing for millennia to either fiercely march through it and prop it open with their technology after securing the other side, or fiercely defend themselves against whatever might try to come through to their world. In contrast, locals had wasted a lot of those same millennia treating each other or the Earth quite poorly.

The Elucidans stormed through the Gate of Heaven with ease, taking mere days to neutralize local resistance with horrifying displays of force. During their final weapons barrage, Ayo lost his 100-meter Olympic gold medal, awarded for his 9.43-second “miracle at Malaga,” when his apartment building was vaporized while he was out visiting a friend. To suppress a prolonged resistance, the conquerors followed this operation by erasing the contents of all computer servers, hard drives, and smartphones owned by locals worldwide with precision EMPs, snuffing out the entirety of locals’ digital history in the blink of an eye.

After these traumatic events, locals around the world were distraught, but the newcomers benevolently set up new governmental, legal, medical, financial, communications, and media infrastructure in weeks, putting themselves in charge as a “temporary measure.” Since locals were clueless about their language and the complexities of their civilization, the Elucidans generously dotted the planet with green arcologies that provided public housing, schooling, and medical care for them, as well as make-work jobs for local adults that were meant to “civilize them with dignity and frustrate their historical tendency toward sloth,” as their leaders put it.

As the last step of their opening act, the Elucidans enabled many locals to breathe a sigh of relief by giving them replacement smartphones that connected to their new communications infrastructure and never needed charging. After all of these changes, their leaders repeatedly announced that they had more than fairly compensated locals for the replacement of their economic order, *especially* after factoring in the damage it had caused to the climate. They then proceeded to live wherever they pleased on Earth, generally in planet-friendly luxury surrounded by plenty of green space.

• • •

Bang cracked the starting pistol and the sprinters were off, fiercely jockeying to cover the 100-meter distance. The renowned worlds champion Obi Spludi sprang out of the blocks a tad slower than usual, leading him to cross the halfway mark slightly behind the bulk of the pack at a still amazing 6.08 seconds.

“Go Spludi!” Ayo roared from the couch, pumping his arms at his sides as if he were running next to him on the track. “You got this!”

As if hearing his cheer, Spludi began to accelerate with a gritty look on his face, passing one runner after the next. He then leaned markedly forward about two paces before the finish line, narrowly winning the race in a worlds record 11.02 seconds. Ayo leapt to his feet in sync with the spectators in the stands, clapping loudly as the announcer yelled praise for Spludi in the midst of the crowd’s thunderous applause.

The press immediately mobbed Spludi on the track, eager to get his thoughts on the race. Lauded reporter Hawa Zenski was first to reach him.

“Respectable Spludi,” she cheerfully began, her voice echoing on the stadium PA system as the crowd quieted down. “Respectable Spludi, what a race! The worlds watched with awe once again as you set a new standard for human excellence.”

The crowd roared applause at this for what felt like minutes. Spludi beamed a charming smile in response, basking in their attention and that of the spectators beyond.

“Respectable Zenski,” he boomed, raising his hand to quiet the crowd. “I thank you kindly.”

“Respectable Spludi,” Zenski continued with a nod, “what can you tell us about how you set another worlds record today? Do you have any advice for aspiring runners who want to achieve the same level of success that you have?”

“Respectable Zenski,” Spludi replied, “I do and am happy to share it.”

Spludi turned dramatically to face the camera and said, “I credit these two simple steps with bringing me to greatness. Step One: Work hard. Any human being—on either Earth or Elucida—who puts in the hard work, which means eating healthy, training well, and meditating, has as much of a chance as I do to run in races like these and win them. We all know this is true on some level, but it bears repeating. Hard work is absolutely *the* key to success—you just can’t be afraid of it in a meritocracy like ours.”

Zenski nodded her approval with a broad smile.

“Step Two: Believe in yourself,” Spludi continued, as his aura appeared to take on a colder glow. “You *must* believe in yourself unshakably to be able to set one worlds record after another running against the best sprinters on two planets. Unfortunately, many people either lack strong self-belief, or aren’t willing to work hard enough to make it onto this track with me. But I’d love more competition, Respectable Zenski, I really would. Don’t get me wrong, I love being the best in the worlds at what I do, but it does get lonely at the top of the mountain sometimes.”

The crowd chuckled jovially at this remark. Spludi flashed his winning smile once again and promptly marched away amid the throng of reporters, waving vigorously at the stands as he did so. As he receded into the distance and the TV announcer resumed his post-race commentary, Ayo’s smartphone suddenly rang. His friend Ingmar Johansson was calling from the stadium.

“Hey, did you catch Spludi’s interview?” Ingmar asked.

“I sure did,” Ayo replied. “How was it seeing the race live?”

“Wonderful, man! Just wonderful,” Ingmar said. “Pretended I had to sweep some of the stairs facing the track, so I caught every second. Sorry you couldn’t make it today—tough luck with that frakking algo.”

“What can I say?” Ayo shrugged. “At least one of us could be there.”

“Yeah, next time,” Ingmar replied. “But anyway, that’s not why I’m calling. I noticed that Spludi left out *the* most important step in his interview.”

“Really?” Ayo chuckled as he prepared for the familiar punch line. “Can’t say I know what you mean, Ingmar. I must have missed it!”

“Why, Step Zero, of course,” Ingmar said cheerfully. “Turn on your divine light!”

They both laughed at this for a while as spectators slowly exited the track area.

“So, Ingmar,” Ayo began as their laughter subsided, “about that. I have some good news to share.”

75

Renee Pillai lives in Malaysia and is her small mining town's hard-scrabbling, all-seeing, resident writing oddity. Every so often, she can hear the all-clear whistle and the dynamite blast that follows. She has a Nicholl Fellowship in Screenwriting awarded by the Academy of Motion Picture Arts and Sciences, and will make her directorial debut in 2024 with Calico, an animated short film about growing up mixed race. This F&SF debut is her first story of the Stratum realm, of life where obedience is paramount and redemption is a privilege. And where a girl's choices drives her down a guilt-ridden path.

Prisoner 123 Is Guilty

By Renee Pillai

Mari Absel woke up and she didn't know why. Then she remembered and knew she would never sleep again. Torment was hard to escape, even in dreams.

She looked around her cell. It was stark but clean, a concession to her status as the only child of Spire City's Chief Censor. Besides, she was a Khtan. One from an elite house at that.

Khtans were the All-Knower's chosen people, and they governed as a divine right. Well, Khtan males did. Khtan women needed to be shielded and guided through life because they were more precious than the rare ores that made Spire City so very wealthy.

It was why they did not venture out alone, why each of them had a distinct facial tattoo from cheekbone to chin, and why their lives were planned for them from cradle to grave.

That last point was a sore one for Mari. It was the reason why she was imprisoned, after all. And in her deepest heart, she knew full well she deserved it.

"Prisoner 121, the Inquisitor requests your presence."

The MERC guard stood outside her cell door. MERCs were Khtans born with deformities, culled into genetically modified soldiers—a Mutated Entity Repurposed for Combat. This particular guard wore oversized armor and was larger than any being should naturally be. He called out again.

"Prisoner 121, the Inquisitor requests your presence now."

...

The Inquiry Room was surprisingly large and bare for an interrogation. Mari supposed torture devices would reveal themselves when needed, unfolding from the smooth walls like the appliances in her home.

Her parents' home, she corrected herself. She was a Passage Day away from reaching her majority. Still a child under the law.

Yet here she sat. In a room no Khtan elite had any business being in, ready to be interviewed by the Inquisitor.

He sat opposite her. A man of duty, and as just as a Khtan could hope to be.

When he finally looked up from the text cube, from its floating words detailing the case, he got right down to it.

“Do you know why you’re here?”

“Yes.”

“Do you admit your guilt?”

“Yes.”

Her ready admission surprised the Inquisitor, and he wasn't a man easily surprised.

“Why did you do it?”

“I didn't want to be cleaved. I wanted to make my own choices.”

Another unexpected response. One that made no sense to him. He waved his hand over the text cube, flipping through the hovering words. And found nothing.

So, he leaned back and said, “Why don't you tell me what happened?”

• • •

Mari's father was a quiet man. Many assumed his calm manner was due to a contemplative nature. Not that he was frozen inside.

Which was why when his daughter refused his choice for her mate and defied his order to be cleaved, he did what any high-ranking Khtan would

do. He called it a sin.

The only way Khtan sins could be absolved was during Redemption Day. When the guilty were punished. And honor was restored.

Mari grew terrified. She had been to enough Redemption Days to know these punishments were just another word for the disfiguring tortures that awaited in the Redemption Pit.

But her terror was not for herself. It was for Flaura.

Flaura was an Under maid who worked in the Absel household. She was also Mari's only friend in the world. And now that bond was going to bring her harm.

Not that friendship between Khtan and Under was illegal. But the only reason it was not was because such a thing should never have been possible.

Life was lived vertically in Stratum. Spire City was its pinnacle, fully artificial with its pristine jeweled towers and simulated plant life. And Deepsoil, with its real dirt and mess that came with the natural world, sat at the bottom. Home to Stratum's watery mines.

Spire City was where Khtans lived and Deepsoil was where the Unders who served them belonged.

Clear lines had been drawn centuries ago. Yet on the night Mari defied her father, the girls sought comfort from each other.

"I wasn't thinking. I just...There has to be a way out."

"The sin has been committed. You cannot un-sin," said Flaura.

"But it is *my* sin!"

"And I am your Underling." With a resigned sigh, Flaura asked, "Can I look at my things?"

Together, they removed a small carved box from a niche behind Mari's bed.

Flaura took out a photocube. She pressed a button and several snapshots floated about the cube. Pictures of her family, her friends, and her home in Deepsoil.

"I wish I had a picture of us," said Flaura.

“It is not allowed. The soul shall not be trapped in graven images.”

“I am in these pictures. Does my soul seem missing to you?”

Mari had no answer for that so she simply hugged Flaure close.

“I would do for you as I would for myself. I will find a way, I will find it.”

But the way Mari found was flawed. Her plan to free Flaure from Redemption Day had gone awry in the worst possible manner.

The punishment for the Sin of Defiance was the removal of chunks of flesh and the insertion of bore worms into the fresh wounds. That was to be Flaure’s burden.

Defiance was the fifth biggest sin, just below Curiosity and the Unspoken. The Unspoken’s punishment had pride of place in the center of the Pit but was rarely used.

So, when Mari and Flaure were caught attempting to escape, Mari was returned to her family’s private box in the arena, where her parents sat.

While Flaure...well, Flaure was led to the center of the Pit.

The details of what followed were so traumatic for Mari that all she could remember were the sounds. The wet whine of a saw. Flaure’s screams gurgling into silence. The anguished yell of an unknown male.

And the sound of her own tears.

• • •

The Inquisitor’s frown was one of confusion as he listened to Mari’s confession.

“Hold on.”

Flipping furiously through the text cube’s floating words, he came to a pertinent section.

Mari watched as he added notes. His index finger moved in midair as new text appeared.

When he was finished, the Inquisitor said, “What did you do next?”

“What could I do? I had killed my friend.”

“Yes. But you did do something after that, didn’t you?”

“I did.”

“So tell me what you did.”

• • •

Mari removed Flaure’s box of treasures from behind her bed.

Inside was the photocube with Flaure’s pictures. Some dried flowers, a shiny button. There was a pretty necklace with a card:

“Dear Flaure, For your Passage Day. With love and hope, Mama.”

Mari shut her eyes tight, blocking out the pain. When she opened them again, she noticed something else nestled in the box. Something wrapped entirely in ribbon. It had a tag attached with Mari’s name on it.

She unraveled the gift to find a mirror and a short metal tube. Both were alien things to her.

Mari looked in the mirror and the shock of seeing her own face for the first time made her drop the other gift.

The metal jammer activated as it hit the floor. And swept clear Mari’s ever-present facial tattoo.

This time when Mari looked in the mirror, she saw someone who wasn’t Khtan. She saw someone who could be anything. Even an Under, like Flaure.

Searching out her plainest coat, Mari emptied Flaure’s treasures into its pockets.

From a bottom drawer, she retrieved the tunic and pants of an Under serf. And put them on.

• • •

Deepsoil held a dilapidated charm, especially for someone who had never been allowed to go anywhere. A flesh-and-blood version of sterile, synthetic Spire City. It was messy, dirty, with smells Mari couldn't begin to process. But it was welcoming, alive in a way the City never was.

Mari showed the photocube pictures of Flaura's home to market vendors and passersby and soon found her way to the cottage.

It was not a big home, but it had a large yard, and someone had taken the trouble to plant a small garden.

Mari was about to knock when the door opened.

A man with familiar features exited, startling them both. Dalvid Allborn was a young Under, but there was an air about him that suggested whatever life he'd lived was already too much, too hard.

"Can I help you?" he asked. Polite yet abrupt.

"I'm...I was Flaura's friend."

"I've never seen you before, have I? What's your name?"

"I'm...My name is Amaria."

"Amaria...I'm sorry, I don't—"

"She called me Mari."

Shock gave way to realization, and quickly bubbled into rage. Dalvid's face shuttered cold as he shoved her. She stumbled back, almost falling to the ground. But it wasn't enough. Nothing would be enough. His eyes landed on a shovel.

Wielding the rusty garden tool like a perfectly balanced weapon, he advanced on Mari.

"Wait! Stop! I brought her things."

That meant nothing. Flaura's belongings were not the same as Flaura. Dalvid swung the shovel at Mari's head, but she managed to pivot away. And somehow avoided all his other blows.

But escape was only possible as long as there was space to move. Once he had backed her away from the stairs, there was no space left. She was cornered.

Without hesitation, Dalvid dropped the killing blow.

Only for it to stop inches from her face, the trembling shovel halted by another's grip.

"Are you insane?" asked Petro, Mari's savior.

Dalvid stared daggers at his best friend.

"Let go!"

Ignoring him, Petro turned to Mari. "What did you do?"

"She killed Flaure!"

Dalvid's wild, venom-filled accusation stunned Petro, and devastated the couple behind him, Trevel and Gaia. They were parents to Dalvid. And also to Flaure, Dalvid's sister.

Trevel's voice was sympathetic. "Dalvid, Flaure died by Redemption."

"Because of her. Let go!"

Dalvid tried to jerk the shovel back, but Petro held firm.

Trapped, Mari whispered, "I'm sorry. She was my friend."

"She wasn't your friend! She was your Underling!"

"Let her go, son," said Gaia.

Dalvid couldn't believe it...his own mother.

"Didn't you hear me?" he said.

"I did. We all did. Now let her go, Dalvid. Please."

• • •

The Inquisitor interrupted Mari with a raised hand. As if he had heard too much. Just not enough of what he needed to hear.

“Where did all this happen?” he asked.

“At Flaura’s house. But he stopped. He didn’t harm—”

“This happened in Deepsoil?”

“Yes, but they didn’t do anything to—”

“You admit you went to Deepsoil, then? You know that’s forbidden.”

“How else was I supposed to return her things? They deserved that, at least. To have something of her, to have the things she loved. Don’t you see? I killed Flaura. I’m guilty!”

Powering down the text cube, the Inquisitor nodded. Unasked-for pity in his eyes.

• • •

The Hall of Inquiries was as stately as any room in the Grand Doma, the central governing and administrative tower in Spire City.

It had marble floors and vaulted ceilings. The height was necessary because the walls were lined with bookshelves housing cubes that looked nothing like books. And there were a great many of them.

The Inquisitor went over to where the Filing Clerk sat. There was a casual familiarity between the two mid-level Khtans.

“I think we can close the case for Prisoner 121.”

He placed Mari’s text cube on the counter. The Clerk’s eyes lit up.

“That’s the Absel girl, isn’t it? It’s all anyone’s talking about. Did she admit it?”

“Yes, she did. But quite by accident.”

“You tricked her?”

Shaking his head, the Inquisitor said, “Not at all, she admitted everything by her own account. She went down to Deepsoil, no question about it. But her reasons....” He paused, struck by the memory. “She was deeply consumed by guilt.”

“As she should be.”

“Not for this, not for going down there. Somehow the silly girl thinks she’s here because she killed someone.”

“Who?”

“Some Under who worked for her family.”

“A dead Under?” The Clerk let loose a snort. “What an odd thing to feel guilty about.”



Meighan Hogate is not a cosmic dragon wizard inhabiting the flesh of a parakeet. He is a human, non-professional writer originally from Upper Deerfield, New Jersey and currently residing in Manassas, Virginia. He graduated summa cum laude from Rider University in 2009 and enjoys writing villains and flawed protagonists, as they are objectively more fun to write than straight-laced heroes. He is proud to make his debut in F&SF with this tale of a despicable avian scavenger.

Fools and Their Money

By Meighan Hogate

Pheera stares intently into the brume. He can't see anything through the milky haze, but it would be uncharacteristic of him to close his eyes under such circumstances. He cocks his head slightly. Still silent, as expected. Rigor mortis has surely set in by now. Still, he waits. He has to be absolutely sure they've all gone back to sleep before proceeding. One could never accuse him of being impatient.

It's hot and muggy. The insects have been crawling underneath his feathers. He notes with satisfaction that not a single one has managed to cause an itch. The toxin works. His feathers will be full of dead bugs and he smells dreadful, but that's okay. He intentionally makes himself smell worse in the villages anyway to keep the less interesting people away. This is no different. He closes his eyes and tilts his beak skyward. He really must see if he can find himself in the employ of a chemist again. Such useful information. Pheera values useful information. These men, the men who lie at the bottom of the bog with the creatures' eggs now gestating inside them, they had no value. The contents of their pockets have value, but the men themselves were not unique at all. What was it the boy said? An urgent mission to retrieve a powerful amulet to legitimize his claim to the throne and save his kingdom from the evil clutches of...keh-keh-keh-keh...who cares? Not important enough to relive. They were fools, and their quest was not unique. They thought they could hire Pheera on the cheap. They made noise in the forests. They allowed themselves to be drawn into this trap. Utter, utter fools. Pheera had given them every opportunity to prove themselves of interest; he even gave them the opportunity to avoid the trap. The only response to his well-reasoned guidance was the typical turgid flatulence excreted by the boy's doughy, self-proclaimed seneschal, "Can't we get there any *faster*?"

"Pheera takes you on safest route now."

“That’s *not* good enough, you wretched thing! Perhaps time doesn’t matter to an uncultured, filthy wilder like you, but in the civilized world, *time* is everything! I don’t see why we need to pay for this dreadful creature’s services, sire. He makes a mockery of us at every turn, he leaves feces *everywhere*, and last night he dragged that...that...that rotting *thing* back to camp with him and proceeded to *feast on it*! I say we cut him loose here. We shouldn’t pay a low-specie for his ‘services’!”

Bluster. All bluster. If travelers need no guide, travelers don’t hire Pheera in the first place. The fat oaf continually exaggerates the exploits of Great Lord Snot-Boy. Why these people feel the need to place barely fledged children in charge simply because of their genetic legacy never ceases to amuse and annoy Pheera. Any idiot can see Snot-Boy will never rule a kingdom; not for long, anyway...and certainly not after trying to cheat Pheera out of his commission.

“Pheera knows another way. But way is not safe. Survivors few. Current route is best route.”

He knows damn well they’ll immediately jump at the chance to shave three days from their journey. Less money for Pheera, assuming they don’t just try to kill him outright from lack of respect, and more of their precious *time*.

“Do we look as if we *need* protection?”

Will your weapons and armor protect you from the creatures? Fool, assumes the danger is big and equal, not small and many. *Krhagh!*

Pheera tilts his head down. He has a conception of time, too, and he doesn’t particularly enjoy wasting his time with this party of imbeciles. He will enjoy their screams, and he enjoys the silence now, but...the silence *now*? Pheera sits in the treetop, momentarily confused. The silence now. They’ve sprung the trap already. They’ve been dead for some time. How could Pheera have forgotten...He freezes in a panic. *Did he say any of that out loud?*

Oh, what a stupid, foolish mistake that would be! Hours of waiting patiently only to be denied the prize of his labors out of simple boredom. He curses his memory. It’s useful. It has helped him on many occasions, but he never can seem to outgrow the nasty, childish habit of mistaking his

memory for the present moment. Why does it always feel so real? Colors and imagery, vivid and sharp. Sounds as crisp and clear as if they are occurring now. Smell, touch, taste...all so real, recorded in perfect detail. Can one blame Pheera for getting lost in the past? His people certainly can. His people supposedly have memories just as clear and perfect as his. So why don't they ever suffer this intolerable inconvenience?

Pheera jolts himself from his self-pity and tilts his head to pick up the sound better. Nothing. Still silent. He waits for several minutes. He relaxes. He didn't say anything out loud. He didn't say anything out loud, or they couldn't hear him talking to himself at this height. The creatures lie undisturbed.

He closes his eyes. He must not allow this to happen again. What had the scholar taught him? Past tense, *past tense*! When entering the memory, use the past tense! Pheera *watched*, not watches! Snot-Boy *cried* ceaselessly about his lost wealth. Pheera must narrate in the *past tense* to avoid this type of confusion.

He's done it before. He's successfully entered his memory without becoming lost in it. He has even pulled himself out of it intentionally. He has control. He cocks his head slightly and wonders why he lost control now. Guilt? Apprehension? No, can't be, can't possibly be. Not Pheera. Pheera has no regrets. Pheera is never nervous. Pheera always has a way out, always has an escape plan. Boredom. Must be boredom. But why should Pheera be bored? This waiting, this silent waiting, this is an investment. Certainly more palatable than his wards constantly barraging him with their ceaseless nagging. This patience will be rewarded. He's guaranteed a return on his investment for his patience here, whereas before there was an equal chance of low coin, no coin, or an arrow through the chest. Pheera curses himself for becoming bored just as the moment of action is approaching.

Pheera is certain he has waited long enough. He slowly spreads his wings, careful not to make a single sound that would attract the creatures. He unfolds and stretches his manipulation claw, an unusual third appendage that he usually keeps hidden for fear that the more religious will take it as a demonic symbol rather than the result of a random gift of his genealogy. It cracks slightly. Pheera stops, his wings outstretched. This high up in the

canopy, that sound should have been mistaken for a natural creak in the wood. It was very soft. It probably won't attract their attention. Pheera feels silly. He might have been *talking to himself* and it didn't attract their attention. Why would a gentle crack of the tendon draw them? Still, best not to take foolish risks and be denied the prizes he's waited so patiently to retrieve. He stands perched for a few minutes and feels the breeze against his wings. How good it will feel to be airborne again!

Satisfied that he hasn't awakened the swarm, he lifts off and glides down toward a nearby pond. He chose that spot earlier. Landing right on top of his quarry would increase the risk of landing on a piece of armor. That unnatural clang would definitely attract attention, and not being able to see his touchdown site, the risk of calling the swarm is too great for the sake of impatience. He touches the water as lightly as a falling leaf, then crouches, ready to take off instantly should his arrival be detected. He hears nothing unusual. The rustling of the trees and a soft trickle of water. Slowly, silently, he slogs his way ashore. Every step is deliberate, every movement careful. He pulls a reed with a long, thick leaf attached from his bandolier. He knows the bodies are in the clearing nearby. He doesn't want to take the risk of clanging his toe on the armor. The resistance from the leaf will tell him when he's found his quarry. He pushes the leaf lightly against the ground, his heart racing. What a shame it would be to lose it all now. All it would take is one errant sound.

The leaf bends. He retracts the reed and tucks it very carefully back into his bandolier. He leans down, close enough that the mist does not obscure his vision, and inspects his prize.

It's the old, fat, self-proclaimed seneschal.

Pheera is delighted. This is the one with the coinage. He estimates four gold high-specie, twelve silver high-specie, and an assortment of twenty-seven low-specie of various metals. The fat one kept his money in a special pouch just under his chest armor. That must have been uncomfortable. He was smart not to leave it out in the open as so many travelers did, but deft concealment failed to defend the "royal treasury" from Pheera's diligence.

It takes the scavenger nearly a full hour to carefully and soundlessly remove the plump oaf's breastplate using one of his primary talons and his manipulation claw, stopping to rest at intervals when the pressure of

balancing on his other leg grows unbearable. The task is made more complicated by the body's uncharacteristic purple swelling from the eggs now gestating just under his skin and his ever-stiffening joints. The effort is well worth it, though. The seneschal's currency pouch now lies exposed. Pheera could just take the currency and fly, but he knows there are additional items of value on the other men. He opens one of the small pockets on his bandolier then carefully removes a single coin from the bag. It takes him a quarter-hour to fully loot the purse, taking each coin and placing it in a different pocket so as not to make them jingle. He reaches toward the seneschal's wrist and carefully removes his left vambrace. The fat oaf's other treasure glistens gently in the muted illumination. His silver rosary chain will fetch a high price in several cities. There are always plenty of opportunistic perverts looking to impersonate priests to extract sexual favors, and this chain is ornate enough that it might even convince a highborn to grant some enterprising lecher passage, provided the costuming is right. Not that Pheera will volunteer any helpful tips. While Pheera is a drama critic with an exacting attention to detail, no one ever asks for his opinion on fashion.

He is finished looting the fat one's corpse. He starts to grab the reed with the leaf attachment again and stops. He feels like he's forgotten something. Impossible. He's certain he's extracted everything of value from the oaf. He'd been observing him for several days. The coins, the rosary. He knows that's all he had when they entered the swamp. He looks at his swollen face and he can feel the value of the missing item like a phantom, mocking him. Is he sure he extracted everything of value? Pheera feels there's something more, something big. Big enough to risk reliving the memory?

Pheera remains still and indecisive. The ghost of the missing item tears at him like a sinkhole. He decides to risk it. He focuses on bringing the memories forward, tilting his head gently from side to side in a simplified version of his people's remembrance ritual.

Past tense, Pheera. Past tense. This part of the Great Tale is not happening now. Use the past tense. See what you *overlooked*. Past tense.

He sees...*saw* the fat man at the fire in crystal-clear detail, counting his rosaries. He *was* counseling Snot-Boy on the characteristics of a great ruler. Not here, not here...Not the right moment. Pheera breathes out through his

nares slowly and tilts his head again. Past tense. No noise. It is possible to enter without becoming lost in the moment. Dive again, Pheera. Past tense....

He watched from the branches at a distance, pretending to be occupied with his meal. They wo—*didn't* come near. They talked. They shared stories of love interests. The plump oaf recounted a personal tale of romantic interest. Pheera was tempted to gag on the ripened pile of raw fur and meat he'd hung from the tree above him. The treasure. He feels it. But where? He feels the pull...he feels the answer he wants beckoning him deeper into his memory. He follows. Past tense....

The "devout" seneschal bragged about his failed attempt to court some countess. He reached into a pocket to show the men, he *has a brooch!* Given to him by Countess Who-Cares! Where is it? What had he done with it? Pheera had forgotten about the brooch. It will certainly fetch a tidy profit among the upper castes. Precious jewels that glitter in the moonlight...more valuable than the rosary chain! But where... where...where to start looking for it? He forces himself to focus solely on the brooch. The history. The last place he saw it.

A village. A stop for supplies and rest. The fat oaf had the brooch at the village. He was playing with it before entering...Pheera's heart sinks. The brothel. The whores. He rewatches the man enter a brothel in the village. He's disappointed, but he clings to the hope that maybe the man is simply meeting a clandestine contact, a spy for his Great Lord Snot-Boy. Perhaps he'll still have it when he emerges. Pheera crouches against the rooftop, quietly, gently. Most of the windows are obstructed. He knows this from his initial circling pass. He hears the sounds of men being pleased inside. It's so difficult to make out one distinct voice. Dammit! The matriarch is so *loud!* She just won't stop disciplining the soupmaidens! Pheera's heart freezes. *What if she wakes the creatures?*

Pheera snaps back to the swamp in terror, his heart pounding. He listens intently. He hears nothing. Stupid, stupid, *stupid*. Pheera shakes his head slightly. He had done it again. He can't afford that kind of mistake now. What if he makes a sound? He's lucky he was reliving one of his moments of stealth and not one of his uncouth hecklings of so-called "artists."

He stops his mind from remembering a particularly scathing commentary on a bard's "saucy" limerick. Not now. *Past tense, vile thing!* Use the words. *Was. Happened. Did.* Use the words while remembering. Narrate the event. Don't live the event.

He forces himself to calm down and reenters a meditative state. You're in a swamp, you were at the brothel in the past. This *happened*. This is the past. This *happened*.

He brings the image of the brothel back and attempts to regain his train of thought.

The moment he *emerged* from the brothel. Where was the brooch? Not in his hands. Pheera feels no memory of seeing the brooch after the brothel. Is it in a pocket? It will take time to search the corpse fully; wasted time if there's no prize.

How to tell if the brooch is there? How to tell, how to tell...no memory after. What did that fat oaf do in the brothel? Can he isolate the seneschal's voice? He listens...*listened*. Pheera *listened*. Find the voice, one voice. While he was in the brothel. Find the voice of the man, the voice of the man, the voice of the man...moaning...*Ugh!!!*

Pheera opens his eyes in disgust and glares at the disfigured, swollen face, making certain that the moan wasn't in the present moment. The seneschal *had* met with someone clandestinely and that person was *certainly* not a spy. Surely he wouldn't have been so foolish as to use such a valuable item for this? He reenters the memory and listens harder.

Moaning! Kakh! Before this!

The voices are muffled. Focus harder. One voice...one voice...

"P—n-f-m-mres...p-mmy mm mu..."

He opens his eyes. He replays these phrases over and over. He can't make them any clearer, but he can extract the meaning. The tone of voice. A delighted shriek. That same shriek intermingled with his moans...*Kakh!* The *moaning* again! How one can *moan* like this and call Pheera the "uncultured, filthy wilder" is beyond his tolerance to bear! *Kakh!*

"P—n-f-m-mres...p-mmy mm mu." Delighted shriek. An extended period of moans. He opens his eyes. He's extracted the meaning. He can

hear the plump oaf saying the words clearly now. A new construction, not from his memory. “Painful memories...pretty on you.”

Pheera silently curses himself for wasting his own time. He knew there was nothing else of value, and yet he let himself be distracted by prizes long lost. He would never get close to the brooch now. The matriarchs guarded their hoards zealously. It's not worth Pheera's time when treasure is readily available here.

Pheera resists the temptation to kick the fat oaf's face for making him picture his bulky frame engaging in sexual intercourse with a young lass multiple times with no reward to show for it, and proceeds to his next victim. The leaf bends against another piece of armor. This one is a simple soldier. Pheera knows he has some coins on him, but only a few. He also has a utilitarian dagger that might prove useful. The dagger is either at his waist...no, not at his waist. Then he must have it in his...hand. Pheera is again disappointed. The blade is buried up to the hilt in the man's neck, and his stiff fingers are wrapped tightly around the handle. There will be no retrieving it now, not without making an awful racket. He wonders if the man had attempted to bore the creatures out...no. That type of wound would only be skin-deep. This was a deliberate attempt to bring about the sweet embrace of oblivion, skewering himself on his own weapon of war on his own terms rather than facing a slow and agonizing defeat at the claws and pincers of his little enemies. Pheera can respect that, though it's still a shame about the dagger. It's a very nice dagger.

His disappointment is short-lived when he is pleasantly surprised by the soldier's coin purse. It's far larger than he'd anticipated, with a stash of silver high-specie that rivals the wealth of the seneschal. His respect for the soldier grows. He hadn't once revealed or boasted of his wealth on the journey, and only ever used low-specie for simple meals and simple transactions. He hadn't even entered the brothel. He wonders what he was saving for? No matter. A trivial consideration.

Kakh! Pheera notes with annoyance that he is out of pockets. He will have to wrap the next coins carefully before pocketing them. Still, not a bad problem to have more treasure than he planned for. This business will take the rest of the afternoon, but it will be well worth it.

He finishes looting the soldier, then two more corpses that yield trifling pittances. Finally, he comes across Great Lord Snot-Boy. *Ekch...* they were not kind to the young one. It looks like they burrowed right into his left... no... *both* eyes. Irrelevant. The treasure. Pheera is here for the treasure. The amulet. Easy enough to remove from the boy's neck. It still glows. *Krhagh!* Magical properties? Lies, more like it! Did nothing to protect the boy, in any case. Still, fine jewelry. Should sell well. He carefully wraps the amulet and places it in his pocket, then he turns his attention to the boy's ring finger. *Kakh...* clenched in a fist. Pheera is slightly irritated. He wants to go back for the dagger, but he also wants this ring. He has been very fortunate not to attract the attention of the creatures thus far, but he will certainly attract them by attempting to retrieve either of these items. When the creatures emerge, it will be hours before they fully retreat again, and he does not want to be in this bog at night. Too many predators, too many lost. It really is no choice. The ring is the higher value item.

Pheera yanks a hand axe from his belt and begins chopping into the boy's wrist. He hears buzzing. A screech. The unmistakable sound of the hive awakening. He doesn't have much time. He chops more frantically. The hand won't come loose! Why won't it come loose? Great Lord Snot-Boy doesn't have that much muscle! He always looked frail! A hissing sound. More buzzing. *Screeching. Stupid stubborn tough bone! Come loose! Great Lord Snot-Boy no longer needs you! Pheera needs you!*

He hears them approaching. The many legs of the vicious swarm, longing for the opportunity to propagate their young.

He keeps bringing down the hand axe on the boy's wrist. He misses and hits his vambrace. *Stupid foolish Pheera! Stop panicking and hit bone!* He misses again. The hissing surrounds him. *Hit bone! Hit bone!* He hits, the bone cracks, but does not break. He misses and hits the dirt. He hits again, the bone cracks some more. Screeches. *Screeches!* The sound grows deafening. He spreads his wings. *Hit bone, hit bone, hit...Bone!!!* With a final, sickening snap, the bone is fractured. Pheera rips the hand free, tearing the remaining muscle tethers from their fleshy bonds, and immediately launches himself skyward. He hears the creatures below him in the brume. Close. Very, very close. He returns to the safety of the perch and casually picks at the hand with some instruments. He'd ordinarily tear at it with his beak and make a meal of it, but the creatures' eggs taint fine meat,

and they aren't particularly picky about which creature's tissue they gestate inside of.

• • •

He sees the two flames dancing below the tree line. It's hard to miss them on such a severely overcast night. No chance of them being mistaken for a reflection of the sky, and certainly not a reflection of Pheera's own fire on the high tabletop mesa. Fools. Utter fools. He knows why they're here. He had been targeting them all night.

The two foolish young lords had swaggered into town, harassing the locals and flashing their wealth. They boasted. They made demands. Pheera watched from the rubbish bins, only half-pretending to feast. An opportunity not to be wasted, in any case. While the innkeepers and tavern owners were distracted trying to make their tawdry, ramshackle edifices more presentable to the lords, Pheera devised a far better way of getting their wealth.

Pheera wasn't generally welcome in most of the buildings in town on the best of days, so one can imagine how the townsfolk felt about him barging in and deliberately making himself disagreeable at every establishment where the two youths were just starting to enjoy themselves. At the inn, he made a scene demanding a decent meal and intentionally, but seemingly accidentally, knocked over the very expensive-looking roasted beast they had just bought while clandestinely spraying fecal matter anywhere. He didn't really have to go, but he kept a special pouch hidden for just these types of occasions, not that the two young lords made the distinction. Poop was poop to them.

Pheera had nearly been clubbed upside the head, in spite of his uncharacteristically poorly worded protests that he'd pay for a ripe meal. He'd pay! Pheera would *pay*! Pay for a ripe meal, all while clandestinely squirting bits of fecal matter around the inn from his little pouch.

The lords were furious, but not as furious as they would be when he interrupted the bard in mid-tale at the atrium. Pheera would have interrupted him on principle sooner or later. One can only take so many

puns about mountains, swords, and genitalia. Pheera didn't find human anatomy attractive unless it was rotting, and even then, it wasn't a sexual hunger. Of course, the idiots enjoyed it. They enjoyed it a great deal. So Pheera took extra care to make himself a generally disagreeable audience. He perched on a roof and shouted crude insults that were deliberately disharmonious. He then pulled a handful of putrid sludge from one of several large pails he'd stashed there earlier, and proceeded to hurl it in the general direction of the bard. He made sure a few hit members of the audience, and of course, the more red-faced of the young lords.

They were incensed. The red-faced one, his cheeks now covered in gloop, proceeded to try to climb to the roof, with less than stellar results. After the third attempt, Pheera dumped an entire bucketful on his head, insulted the lord's athletic prowess, and made sure to mention he would never be able to climb the tabletop mesa just outside of town. No one could touch Pheera at the top of the mesa.

The crowd dispersed at Pheera's departure. The lords got themselves cleaned up, took out their frustrations on some lowly serfs who had really done nothing wrong, and proceeded to get very, very drunk. Pheera allowed this. He allowed them to drown their rage in alcohol. He allowed them to enter the brothel. He waited for hours until they were engaged in a sexual encounter, nearly ready to climax, and then he burst through the window. Needless to say, the mood was ruined. It was then that the two lords settled on revenge. Pheera made sure to insult their climbing ability again and reminded them that he was staying at the top of the tabletop mesa where they couldn't reach him. He also made sure to tell them he'd be taking flight at first light, and they'd never catch him once he was airborne.

He wasn't lying, but someone had filled the youths' minds with foolishly inflated opinions of themselves. And here they are now. Pheera is thrilled, not just because he's lured them so cunningly to the base of the tabletop mesa, but because he managed to enter his memory without becoming lost in it.

Pheera won't have to kill them. All Pheera has to do is wait for them to get halfway up the cliffside, then watch them lose their footing and plummet to their deaths. The cliffside is treacherous for climbers at the best of times. They call it "Death's Barstool" or something along those lines.

These two idiots certainly won't be able to climb it at night while intoxicated. He doesn't even need to heckle them on. Probably better if they think he's oblivious to their presence. He waits. He hears their oafish grunting. One slips and falls three feet from the base. Pheera sighs and wonders if maybe he shouldn't have let them get quite so intoxicated. They might not make enough progress to tumble to their deaths now. Pheera waits. He passes the time trying to create shadow puppets with his wings and manipulation claw.

He's not pleased with the results. The caravan of performers he'd escorted across the desert made these puppet shows look so easy, and he refuses to accept that his anatomy won't allow him to conduct a decent facsimile. He attempts to use props and eventually manages to create what he considers to be a fairly respectable representation of the mythical Dragon of Ixch. Then he hears a scream of mortal terror cut off with a sickening crack. His companion calls for him, slurring his speech. Pheera waits half a minute, then hears the other slip and fall. He gathers his bandolier and his traveling possessions.

He circles once, twice, three times, and listens. No groans. No screams for help. They are almost certainly dead. He estimates they'd been about halfway up when they fell. Higher than he thought they'd get, but all the more effective when they fell. He dives and lands.

The red-faced one's head has caved in against the rock. Blood and brains and bits of skull form a splatter pattern like that of a dropped melon. The other's neck and limbs are twisted at awkward angles. Bone shows in places. Pheera is delighted. No trouble. No trouble at a—

He feels something zip past his cheekfeathers. He turns in the direction it came from and spreads his wings.

Who could it be? Who could it be? Anyone from the town. He hadn't thought them cunning enough to come out and wait for the young lords' demise, but here someone was, challenging him for his prize. How dare they! How—

“Is this how you killed my half-brother, Pheera?”

Pheera struggles to view his assailant in the dim torchlight. He's at a severe disadvantage. He's too close to the cliffside and can't get a decent

updraft at ground level. He also can't see his assailant. Best to bargain or attempt a bargain. Talk. He must get him talking.

"Pheera did not kill these men! Men killed themselves! Pheera simply retrieves treasures they no longer need!"

The man steps into the radius of the torchlight. His crossbow is leveled right at Pheera's face. Pheera takes a peek at the bolt embedded in the rock behind him. Close. Very, very close. Good shot. The miss was likely intentional. Talking. Must keep talking.

"A murder by indirect action is still a murder, Pheera. I guess that makes me an accessory, though I was here to kill them anyway. I suppose I should thank you for doing the work for me."

"Ah! Then Pheera did you a service! Is it wrong for Pheera to expect payment?"

The man fires. The bolt passes right under his beak. Another intentional miss. The reload is lightning-fast. Who is he?

"Did you forget about the part where you murdered my half-brother? Where's my payment for that?"

"Pheera delivers payment! Here! Take corpses! Rich lords! Plenty of treasure! Pheera will give it to you in a simple life transaction! Pheera wants only to live. Deal?"

"These men would have died anyway, at my hand."

Pheera hadn't expected that to work. Now that he has a clear view of the man, he is buying time while he searches for identifying markings. Tattoos. Hair stylization. The type of clothing he's wearing. It's all so frustratingly nondescript! Pheera needs information! How can Pheera bargain without information?

"You don't even know who I am, do you?"

Pheera says nothing.

"Does the name Alharaghon mean anything to you?"

Alharaghon? It sounds familiar. Alharaghon...

The voice of the plump seneschal comes to him unbidden.

“*Prince* Alharaghon is the rightful king of Skeelstromm, and you *will* refer to him as ‘My Lord’ and *not* ‘Great Lord Snot-Boy!’”

Pheera brightens slightly. He has an idea of who he’s dealing with now.

“Ah! Great Lord Snot-Boy! Pheera remembers him now. Sad death. Very sad. Killed by swarming creatures in a bog. Pheera tried to warn him. Way is not safe. Survivors few. Current route is best route. He would not listen. He needed to save precious *time* and lost all in pursuit of hours. Not Pheera’s fault. Pheera said there was danger.”

“Oh, I’m sure. Just like you told these men that they shouldn’t climb the mesa, right?”

He fires another bolt from his crossbow. It doesn’t miss. Pheera feels it penetrate his torso. He shrieks and extends his hidden manipulation claw in alarm, grabbing the shaft but not yanking it out.

“There it is. The demon’s claw. I was wondering if that was just a myth.”

Pheera gasps for breath and stares at the bolt. Not fatal? No, not fatal, but no guarantees about the next shot. How to bargain? How should Pheera bargain? He tries to sort out everything he knows about this man. Excellent marksman. Half-brother of Great Lord Snot-Boy. Great Lord Snot-Boy was trying to reclaim his kingdom. Half-brother. Educated. Speaks well. Nobility.

“Do you have any idea the suffering you’ve caused the people of my land?”

He fires another bolt through Pheera’s wing. He shrieks, then analyzes. Again, not fatal. Should still be able to fly. His assailant reloads.

“With Alharaghon they would have had a good king. A *noble* king. A king who cared about his people instead of crushing them under tyranny and endless, pointless conflict!”

He fires again. It hits Pheera’s shoulder. He hisses in pain. Half-brother. Educated. Speaks well. Nobility. Talk. *Talk!*

“Instead, we stand on the verge of collapse with enemies on all sides and a plague that threatens to—”

“Then why do *you* not lead?”

There is a pause.

“Excuse me?”

“Then...why do you not lead? Snot-Boy was rightful heir? Title should have passed to you on his death, *kr’r’ragh?*”

“The prince had to retrieve an amulet of power to legitimize his claim to the throne. Without that, *and* his signet ring, his claim was *worthless!*”

Pheera jams his manipulation claw into one of his pockets and screeches, trying to look as pathetic as possible, anything to keep the man from shooting until he can pull out...

“*This* amulet?”

Pheera holds it up in the torchlight. The man looks momentarily mesmerized. Good. Keep him talking. Keep him talking...

“You...you recovered it? You’ve had it the whole time?”

Pheera lifts one of his legs from the ground and drops the amulet into his foot talons. He retracts his manipulation claw and reaches toward another pocket. The man comes to his senses with a start.

“*Don’t—*”

“Pheera has signet ring, too!”

Pheera rips several tools from his pocket and makes a show of cluttering the ground with them. Good. They land right where he needs them. He rips the ring from his pocket and tosses it to the man’s feet. The man looks away briefly to follow it to its destination. Pheera quickly snatches the vice he dropped with his manipulation claw and shifts the amulet into its jaws.

The man recovers from his momentary distraction and levels the crossbow at Pheera again.

“No! No more shooting! Or Pheera will crush the amulet!”

All it will take is one quick squeeze. This vice is spring-loaded, looted from the corpse of an artisan blacksmith.

“Look carefully at Pheera’s tool. He can crush it easily before his death. Fast reflexes.”

The man looks terrified.

“Do...do you have any idea what kind of power is contained within that gem?”

“Power did not protect Great Lord Snot-Boy. Pheera dies anyway if you shoot. Pheera is not afraid of power.”

But Pheera’s opponent certainly is. He’s afraid of it, and he *wants it*. Pheera has an advantage. He presses it.

“Pheera offers trade. Simple life transaction. Pheera will fly away. Pheera will drop the amulet to you. You will keep the amulet and the signet ring and use them to become the new king, a good king. Great Lord Snot-Boy was a fool. He was easily led into a trap. He didn’t even know how to use the amulet to defend himself. But you are smart. Pheera respects that. Pheera offers rule of entire kingdom and the power of the amulet for one wretched life. Deal?”

His opponent licks his lips. He’s thinking very hard. He thinks this must be a trick.

“Unacceptable. You could just fly off with the amulet.”

“Pheera will drop it on the side of the cliff, next to the bloodstain from foolish lord. If Pheera doesn’t drop it, you can shoot Pheera out of the air and take it.”

Pheera gambles that the strong updraft he felt at that height earlier will still be there. He believes his wing is not too damaged. He should still be able to pull off some aerial evasive maneuvers. He doesn’t expect the man to honor the agreement.

“Kingdom for life. Never have to see Pheera again. Deal?”

His assailant’s eyes are wide. No doubt he can’t believe his good fortune. He hadn’t expected to be made a king today.

“Deal?”

The man licks his lips. Pheera knows he has him. He just needs to wait for him to say it.

“My crossbow will be trained on you the whole time. If you don’t drop it right there, I’ll shoot you out of the sky.”

“Deal! Pheera will release the amulet from the vice and drop it. Does new business partner mind if Pheera retrieves some of his tools first? His compass in particular—”

A bolt nearly impales his foot as he reaches for the compass.

“Pheera understands. It *is* a nice compass. Yours free of charge. Remember, do not shoot Pheera after he drops the amulet.”

He absolutely will.

“Get going already. And remember, you’re a dead wilder if you don’t drop that amulet.”

Pheera lifts off. His wing and shoulder are in agony, his torso throbs mercilessly with every heartbeat. Flying will increase the bleeding. He needs to treat his wounds. He should be able to dress them at the top of the mesa, and it should be too high to worry about getting shot, even by this marksman. He reaches the drop point. He feels the updraft, stronger than it was before. He enters the updraft, releases the amulet from the vice, and begins evasive maneuvers. A crossbow bolt still manages to penetrate his leg, but he escapes any fatal wounds.

Fool. Thinks he can save his kingdom with the power of that amulet, but Pheera knows better. Assassin turned king? Ruthless murderer turned king? Thinks he has a kind enough heart to control the power of the amulet? Thinks it won’t unleash the horrors of his own soul? Pheera can see the blackened corpses of his people, oozing with blight. The devastated city. The cathedral, with its roof torn to splinters, and in the center, the charred corpse of the man who thought he could control the Amulet of Khoret’Ka, the ruthless Spirit of...

How does Pheera know this will happen? Pheera doesn’t know how the amulet works or even that it really is magical. Pheera thinks its power is a joke as he flies to the top of the tabletop mesa.... No, as he *flew* to the top of the tabletop mesa.

Pheera sits perched on the battlements and gazes at the devastated city before him. For miles in every direction, anything that was once alive is

reduced to haphazardly strewn sticky masses of oozing black pustules. Pheera wonders how many of them were children...but why should he wonder such a thing? Foolish, foolish Pheera! How could one possibly be bored when there's so much *treasure* to claim! Entire *libraries* of knowledge, his for the taking! And no one will be around to bother him for months! The superstition against this blighted land will keep even the most uncouth scavengers away! He looks out over the city and trembles.

Excitement. It must be excitement. He must be feeling what the fool brother felt when Pheera gave him his kingdom. He shakes his head and lifts off. He starts heading for the nearest library, but he finds himself drawn inexorably to the destroyed cathedral. The epicenter.

Pheera lands. He stares at the charred corpse, still holding the amulet. Pheera is still trembling. He rips the amulet from the man's grasp. The hand crumbles to dust. The signet ring falls to the ground, but Pheera makes no move to retrieve it. The amulet gives off the same slight glow it had in the swamp, when Pheera had no idea what it was capable of.

Pheera doesn't understand why he came here. He doesn't want the amulet, not when there's so much other knowledge and treasure to plunder. He doesn't want this power. And it dawns on him: He doesn't want anyone else to have this power, either.

Of course! Silly Pheera! Pheera is worried someone may use this power while Pheera is within its radius! Fools! Fools with money, fools with power. Fools don't know how to make proper investments. Fools spend at inappropriate times. Fools make bad investments. Sometimes the best investment is to get rid of an investment.

Pheera lifts off and tucks the amulet into one of his many pockets. The city can wait. It will still be there in a week. The stigma surrounding the blighted land will still be there in a week, and Pheera doesn't want anyone to know he has the amulet, or to see where he's going to put it. He knows the perfect place. A little bog protected by thousands of tiny creatures that will kill anyone who approaches.

This is not wasted time. This is a simple life transaction.

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COMING ATTRACTIONS

With this issue *The Magazine of Fantasy & Science Fiction* enters its 75th year of publication, and it wouldn't be able to do so without you and your continued readership and support. Look for "Big Trouble in Sector C" in our next issue by Robert D. Friedman and Barry Malzberg, a new novelet by Clara Madrigano, and new works by Ken Altabef, Phoebe Barton, Alex Bisker, Ivy Grimes, Meagan Branning, David DeGraff, Moustapha Mbacké Diop, Will McMahon, Jennifer R. Povey, Denzel Xavier Scott, Marie Vibbert, Jack Neel Waddell, and many more.

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Wishing you and your loved ones a peaceful season of light and a happy new year,

Sheree Renée Thomas, Editor

Marisca Pichette (she/they) hoards books, bones, and cool rocks in Western Massachusetts. Her stories and poems have appeared in Strange Horizons, Fantasy Magazine, and Flash Fiction Online, among others. This is her second contribution to F&SF—a spell to summon something unseen, yet dimly remembered. To read more of her speculative poetry, check out her collection, Rivers in Your Skin, Sirens in Your Hair (Android Press, April 2023), available to order through her website at mariscapichette.com. You can also find her on Twitter @MariscaPichette and Instagram @marisca_write.

triple knot

By Marisca Pichette

my love, let us
close your eyes with winter leaves
paper your sight as snow descends
dig under your shadow
carve out an echo of your life
(this will last so much longer
so long as we weave our nets).

we have hyphae, not yarn
to knit your stories and there are many
my love.
we have knitted your footsteps
across every angle of your living.

we wield no shears no knives to cull your years
rediverting our threads
through layers of your misplaced
overlapping dropped fates

we find your final heart
in the shadow of a standing stone.

lichens echo your face you no longer recognize

and when you have lain at last

in the last bed
your heart will sprout

a mushroom.

and we will watch you, my love
as your spirit spores release
embrace their freedom
and you travel farther
than you ever dreamed
in your once
life.



Escaping Berlin

A novel by
BRENT MONAHAN



FIVE STARS from IndieReader!

*"Escaping Berlin is a gripping, painful story
about survival, courage, shame and hope"*

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CURIOSITIES

WHAT NOT, A PROPHETIC COMEDY
BY ROSE MACAULAY (1918)

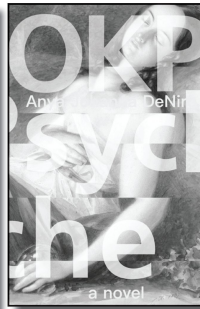
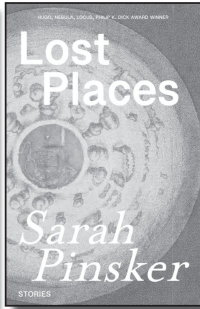
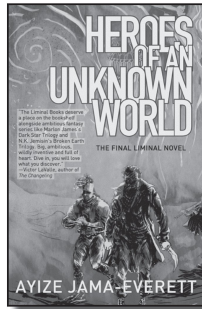
After WWI, England sets up The Ministry of Brains to improve the intelligence of the populace, in the hopes of avoiding war. People are ranked by intelligence, a Mind Training Course is introduced, and marriages and births are regulated according to intelligence rating. The heroine falls in love with her boss at the Ministry—and they run afoul of their own regulations, due to the Minister's disabled sister making him ineligible to marry.

The novel is an effective and at times bitingly funny satire; and the romance works as well. Mixed in is sincere meditation on how we should live and preserve peace—but the intelligence rating scheme and eugenics-based rules on marriage and child-bearing are horrifying. In this novel they lead to babies abandoned to avoid fines. The prime action of the novel concerns the failure of the Ministry's efforts—alternately funny and dark. The desperate grasping at eugenics is an illustration of sincere despair at the foolishness of humankind. I loved the book: an important early work of sf, and a fine novel that deserves the wider readership it might at last be earning.

Rose Macaulay (1881-1957) is best known these days for her last novel, *The Towers of Trebizond*, from 1956. *What Not* is her one sf novel, written in the last months of the War, and was long neglected, probably because the first edition was quickly suppressed under threat of a lawsuit. A recent reprint has at last put its original edition in the reach of readers. 

—Rich Horton

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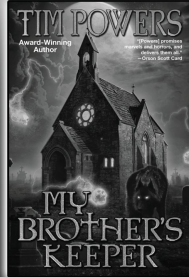


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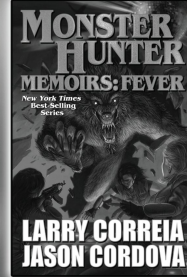
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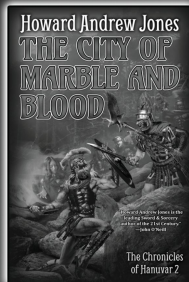
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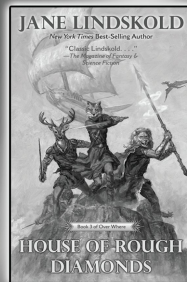
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